reflects the cumulative amount as if SWEPCO had recovered removal costs through its depreciation rates since January 1, 2003 through March 2009.

Q DID SWEPCO HAVE AN ADJUSTMENT B-1.5.12?

A No, adjustment B-1.5.12 was intentionally omitted.

Q. PLEASE EXPLAIN ADJUSTMENT B-1.5.13.

A. SWEPCO reduced rate base by $64,960,236 to recognize the full value of the Pirkey mine-closing reserve, including all interest booked since SWEPCO began collections as approved by the PUC in Docket No. 12855. The Order on Rehearing in Docket No. 40443 modified how these mine closing costs are collected from customers and how they are to be handled in base rate cases. Finding of Fact (FOF) 146D states that these amounts will be an offset to invested capital.

Q. PLEASE EXPLAIN ADJUSTMENT B-1.5.14.

A. This adjustment increases rate base by $16,576,181 for SWEPCO's Oxbow Investment. In Docket No. 40443, the Commission found it was reasonable to include this investment in rate base (FOF No. 141).

Q. PLEASE EXPLAIN ADJUSTMENT B-1.5.15.

A. This adjustment eliminates the Asset Retirement Obligation (ARO) asset ($61,976,617) and accumulated depreciation ($9,922,976) recorded on SWEPCO's books related to the Dolet Hills Mining Company. This ARO asset and accumulated depreciation relate to a subsidiary of SWEPCO that is not a component of SWEPCO's base rates.

Q. PLEASE EXPLAIN ADJUSTMENT B-1.5.16.

A. This adjustment removes $64,005 recorded in FERC Account 102, electric plant purchased or sold.

Q. PLEASE EXPLAIN ADJUSTMENT B-1.5.17.

A. Adjustment B-1.5.17 reduces rate base of the net book value of the Dolet Hills Power Station. As discussed by SWEPCO witness Brice, the Dolet Hills Power Station will be retiring at the end of 2021. In this proceeding, SWEPCO proposes to reduce rate base by the unprotected excess accumulated deferred income taxes and the protected excess accumulated deferred income taxes in a refund provision (regulatory liability) from the effective date of the Tax Cut and Jobs Act (TCJA) to the anticipated date of new rates in this proceeding of April 2021.

Q. WHAT DID THE COMMISSION ORDER SWEPCO TO DO WITH THE ABOVE EXCESS DEFERRED INCOME TAXES IN ITS LAST RATE CASE, DOCKET NO. 46449?

A. The Commission ordered that it would address the regulatory treatment of any excess deferred taxes resulting from the reduction in the federal income tax rate in SWEPCO's next base-rate case (Ordering Paragraph No. 10).

Q. DOES SWEPCO'S PROPOSAL COMPLY WITH ORDERING PARAGRAPH NO. 10 IN DOCKET NO. 46449?

A. Yes, it does.

Q. HOW DID YOU DETERMINE THE AMOUNT OF EXCESS DEFERRED TAXES TO USE TO OFF-SET THE DOLET HILLS POWER STATION BALANCE?

A. SWEPCO witness Mr. Hodgson provided me the grossed-up amount of SWEPCO's Texas unprotected excess deferred income taxes. In addition, each month the AEP Tax department, for which Mr. Hodgson is a member, amortized the protected excess deferred income taxes in compliance with the TCJA. SWEPCO then recorded the grossed up Texas amount as a refund provision (regulatory liability). This refund provision (regulatory liability) grows each month and will continue to grow until SWEPCO incorporates the amortization of protected deferred income taxes into SWEPCO's rates. I then grossed up the Texas amount to a total company utilizing the production demand allocation factor provided by SWEPCO witness Aaron. EXHIBIT MAB-4 provides these calculations.

Q. DO THESE EXCESS AMOUNTS FULLY OFFSET THE REMAINING NET BOOK VALUE OF THE DOLET HILLS POWER STATION?

A. No, they do not. As detailed on EXHIBIT MAB-4, there is still an expected remaining value of $40 million total company or $15 million Texas.

Q. WHAT IS SWEPCO'S PROPOSAL REGARDING THIS REMAINING BALANCE?

A. SWEPCO proposes to expense the remaining value over four years, the anticipated period between rate cases. SWEPCO witness Brice also discusses this proposal. The expense amount included in Texas rates is $3.7 million (see EXHIBIT MAB-4).

Q. PLEASE DESCRIBE RFP SCHEDULE B-2.

A. RFP Schedule B-2 reports the monthly balance of each accumulated provision account, the amount accrued each month, and the amount charged off each month during the test year.

Q. PLEASE DESCRIBE RFP SCHEDULE B-2.1.

A. RFP Schedule B-2.1 provides an explanation of SWEPCO's policy regarding accumulated provision accounts and the benefits these accounts provide to customers.

C. RFP Schedule C – Original Cost of Plant

Q. PLEASE DESCRIBE RFP SCHEDULE C-1.

A. RFP Schedule C-1 summarizes the original cost of utility plant at the beginning of the test year, with additions, retirements, transfers, and the balance at the end of the test year. The schedule reflects pro forma adjustments to book balances for requested plant amounts identified in Adjustments B-1.5.10. This adjustment reflects the changes to plant in service for the accrual of AFUDC resulting from the jurisdictional treatments approved by the PUC, the APSC and the LPSC when compared to the PUC. This adjustment reflects the cumulative change as if all of SWEPCO's investment were subject to the jurisdiction of the PUC.

Q. PLEASE DESCRIBE RFP SCHEDULE C-2.

A. This schedule presents the data shown in RFP Schedule C-1 by each major plant account.

Q. PLEASE DESCRIBE RFP SCHEDULE C-3.

A. RFP Schedule C-3 is a monthly presentation of plant balances by functional classification by plant account. Also shown on this schedule are the requested adjustments to plant in service.

Q. PLEASE DESCRIBE RFP SCHEDULE C-4.1.

A. This schedule lists items greater than $100,000 by functional group included in CWIP with details such as work order number and description, amount expended, estimated completion date, and estimated total cost. Please note that SWEPCO has not requested any CWIP be included in rate base.

Q. PLEASE DESCRIBE RFP SCHEDULE C-4.2, CWIP ALLOWED IN RATE BASE.

A. This schedule requires a listing of the amount of CWIP requested and allowed in rate base for the Company's two most recent rate filings. SWEPCO's two most recent rate filings were Docket No. 40443, decided by the PUC in March 2014 and Docket No. 46449, decided in January 2018. In both of these dockets, CWIP was not included in rate base.

Q. PLEASE DESCRIBE RFP SCHEDULE C-5, AFUDC AND CONSTRUCTION OVERHEADS.

A. This schedule details the methods, procedures and calculations followed by SWEPCO in capitalizing AFUDC. This schedule provides the AFUDC rates for each of the years ended March 2016 – 2020, including the test year, and the amounts of AFUDC generated and transferred to plant in service. In addition, this schedule describes the processes for allocating construction overheads.

Q. ARE THE C-6 SERIES OF NUCLEAR SCHEDULES APPLICABLE TO SWEPCO?

A. No, SWEPCO does not own any nuclear facilities.

D. RFP Schedule D – Accumulated Depreciation

Q. PLEASE DESCRIBE RFP SCHEDULE D-1.

A. RFP Schedule D-1 shows the reserve for depreciation and amortization at the beginning of the test year, provisions during the test year, cost of properties retired, other additions and/or reductions, and the reserve for depreciation and amortization at the end of the test year. This schedule also reports in column (10) the net $115,900,865 decrease to accumulated depreciation associated with the pro forma adjustments described earlier in my testimony in connection with Schedule B-1.5.

Q. HAS SWEPCO INCLUDED ITS ASSET RETIREMENT OBLIGATION IN THE ACCUMULATED DEPRECIATION BALANCE?

A. Yes. SWEPCO has included $8,405,956 for the ARO accounted for pursuant to SFAS 143 and Financial Accounting Standards Board Interpretation No. 47 "Accounting for Conditional Asset Retirement Obligations" (both now referred to as FASB ASC 410) in its accumulated depreciation balance as shown on Schedule D-1, line 10. This treatment is consistent with that approved for TCC in Docket No. 33309 and SWEPCO in Docket Nos. 40443 and 46449. As noted earlier, SWEPCO has excluded the ARO related to Dolet Hills mining because it is associated with a subsidiary that is not a component of SWEPCO's base rates.

Q. PLEASE DESCRIBE RFP SCHEDULE D-2.

A. Mr. Cash sponsors RFP Schedule D-2, which is a narrative description of the methods and procedures followed in booking depreciation, plant retirements and abandonments.

Q. PLEASE DESCRIBE RFP SCHEDULE D-3.

A. This schedule details SWEPCO's plant held for future use recorded in FERC Account 105. SWEPCO anticipates only one asset to be in service this year, which is included in rate base. SWEPCO removed the remaining items from rate base.

Q. PLEASE DESCRIBE RFP SCHEDULE D-4.

A. This schedule shows depreciable plant at the test year-end, the existing PUC-approved depreciation rates, and the resulting depreciation expense. This schedule also shows requested depreciable plant, SWEPCO's requested depreciation rates, and the resulting depreciation expense. The adjustment shown in Column (10) is the difference between the depreciation expenses determined using SWEPCO's requested depreciable plant and requested depreciation rates, and the depreciation expense determined using SWEPCO's requested depreciable plant and PUC-approved depreciation rates. Please note that the depreciation expense recorded by SWEPCO during the test year represents a composite of the depreciation rates approved by the jurisdictions with authority over SWEPCO's rates and this book depreciation expense is the foundation for the Adjustment A-3.4. SWEPCO witness Cash discusses in his direct testimony the depreciation rates requested by SWEPCO. In addition, as discussed earlier, SWEPCO proposes that it recover the remaining value of the Dolet Hills Power Station over four years, after being offset by two TCJA liabilities.

Q. PLEASE DESCRIBE RFP SCHEDULE D-5.

A. This schedule references SWEPCO's depreciation study, sponsored by SWEPCO witness Cash.

Q. PLEASE DESCRIBE RFP SCHEDULE D-6.

A. This schedule sponsored by SWEPCO witness Monte McMahon provides retirement data for all generating units of SWEPCO. As seen in this schedule and described by SWEPCO witness McMahon, SWEPCO plans to retire the Dolet Hills power plant at the end of 2021.

Q. PLEASE DESCRIBE RFP SCHEDULE D-7.

A. RFP Schedule D-7, sponsored by Mr. Cash, provides summary data for retirements, cost of removal, salvage and net salvage on a functional basis.

Q. PLEASE DESCRIBE RFP SCHEDULE D-8.

A. This schedule provides the average service life for each group of assets. SWEPCO witnesses Cash and McMahon co-sponsor this schedule.

E. RFP Schedule E – Short-Term Assets and Inventories

Q. PLEASE DESCRIBE RFP SCHEDULE E-1.

A. This schedule lists each short-term asset requested in SWEPCO's rate base (e.g., materials and supplies, prepayments, and fuel inventory). The schedule includes the book balance for the month end before the test year begins and the month ending balance for each month in the test year in order to determine a thirteen-month average balance.

Q. DID SWEPCO ADJUST THE THIRTEEN MONTH AVERAGE BALANCE OF THE SHORT-TERM ASSETS INCLUDED IN RATE BASE?

A. Yes. As shown on Schedule B-1.5, SWEPCO has decreased the thirteen-month average fuel inventory for coal and lignite to incorporate the optimal tons of inventory required for SWEPCO's coal and lignite fired generating stations. The remaining oil inventory represents the thirteen-month average balance at the test year-end. SWEPCO witness Amy E. Jeffries discusses the adjustment for the optimal tons required at SWEPCO's coal and lignite fired generating stations in his direct testimony.

Q. HAS SWEPCO INCLUDED ITS PREPAID PENSION AND OPEB ASSETS IN RATE BASE IN THIS FILING?

A. Yes. SWEPCO has included the $83,452,444 expense portion of the year-end prepaid pension and prepaid OPEB assets in rate base as discussed earlier in my testimony about the adjustment on Schedule B-1.5.8. As applicable, this treatment is consistent with the Final Order in PUC Docket Nos. 33309, 40443 and 46449 in which the Commission ruled that only the portion that reduces pension cost charged to O&M expense was properly included in rate base. This total prepaid pension and OPEB asset amounts are before the related accumulated deferred federal income taxes that serve to reduce the combined rate base effect.

Q. DO CUSTOMERS OF THE COMPANY BENEFIT FROM THE ADDITIONAL FUNDING OF THE PENSION PLAN?

A. Yes, customers benefit from the investment earnings on the additional fund assets. This has the effect of reducing future pension cost under generally accepted accounting principles in an amount that grows over time through compounding. As computed on EXHIBIT MAB-5, the additional pension contributions recorded as a prepaid pension asset reduced by approximately $9.6 million on a total Company basis the 2020 pension cost that the Company would have had to include in current rates or capitalize to construction costs for future recovery from customers. In other words, had the Company not made the additional pension contributions, the total amount of pension cost that SWEPCO would have to recover through current rates and through capitalized construction costs would be approximately $9.6 million higher, or $19.6 million instead of $10 million.

Q. HAS SWEPCO INCLUDED ITS PREPAID POSTRETIREMENT BENEFITS IN RATE BASE IN THIS FILING?

A. Yes. SWEPCO has included the $28,783,811 expense portion of the year-end prepaid postretirement benefits asset in rate base. This treatment is consistent with the prepaid pension asset contained in the Final Order in PUC Docket Nos. 33309, 40443 and 46449 and the OPEP prepaid asset in Docket No. 46449 in which the Commission ruled that only the portion that reduces pension cost charged to O&M expense was properly included in rate base. This total prepaid postretirement benefits asset amount is before the related accumulated deferred federal income taxes that serve to reduce the combined rate base effect.

Q. DO CUSTOMERS OF THE COMPANY BENEFIT FROM THE ADDITIONAL FUNDING OF THE POSTRETIREMENT BENEFITS PLAN?

A. Yes, customers benefit from the investment earnings on the additional fund assets. This has the effect of reducing postretirement benefit cost under generally accepted accounting principles in an amount that grows over time through compounding. As noted earlier, the amount included for postretirement cost is a negative amount. In other words, the Company has reduced its cost of service in this case by $5,398,507. This cost of service decrease is greater than the return on the postretirement benefit prepayment, which is approximately $2 million. Thus, customers see a net benefit of $3.4 million (total company).

Q. PLEASE DESCRIBE SCHEDULE E-1.1.

A. Schedule E-1.1 details the monthly per book balances by category included in Schedule E-1.

Q. PLEASE DESCRIBE SCHEDULE E-1.2.

A. Schedule E-1.2 explains SWEPCO's policies related to obsolete, damaged, or no-longer used inventory.

Q. PLEASE DESCRIBE SCHEDULE E-1.3.

A. Schedule E-1.3 indicates there were no changes in the accounting policies for the book balances (e.g., started capitalizing, quit keeping items on hand, change in write-off procedures, etc.) for items included in Schedule E-1.

Q. PLEASE DESCRIBE SCHEDULE E-2.2.

A. This schedule lists all studies relied upon by the utility to determine its optimal fossil fuel inventory levels. SWEPCO witness Jeffries sponsors this schedule.

Q. PLEASE DESCRIBE SCHEDULE E-2.3.

A. Schedule E-2.3 details the fossil fuel inventories on hand as of March 31, 2020, by type and location. This schedule reports the total storage capacity, unusable storage capacity and daily burn on full load. SWEPCO witness Jeffries sponsors this schedule.

Q. PLEASE DESCRIBE SCHEDULE E-2.4.

A. Schedule E-2.4 presents SWEPCO's monthly fossil fuel inventory levels for the test year ended March 31, 2020. SWEPCO witness Jeffries sponsors this schedule.

Q. PLEASE DESCRIBE SCHEDULE E-4.

A. Schedule E-4 contains the calculation of SWEPCO's cash working capital allowance included in rate base. 16 TAC § 25.231(c)(2)(B)(iii)(IV) and (V) require that a lead-lag study be performed to determine the reasonableness of a cash working capital allowance. The lead/lag study used in this proceeding is the one approved in SWEPCO's last base rate case, Docket No. 46449 (Finding of Facts 152 – 154). The transmission and distribution investor-owned utilities rate filing package adopted in 2015 provides that if less than five years have passed since the time period examined in the utility's most recently approved lead-lag study, then the utility may use the previously approved Commission lead-lag study in the current proceeding. The provision also requires that no significant or material changes have occurred since the development of the lead-lag study. Less than five years have passed since SWEPCO's last lead-lag study. Thus, by using the last approved study, SWEPCO anticipates savings of around $75 thousand in rate case expenses, which is the average cost of the last SWEPCO and AEP Texas lead-lag studies.

Q. PLEASE DESCRIBE SCHEDULE E-5.

A. Schedule E-5 presents the amount of prepayments, and materials and supplies charged to O&M expense by month for the test year.

Q. PLEASE DESCRIBE SCHEDULE E-6.

A. Schedule E-6 provides SWEPCO's customer deposits for Texas customers and other states. SWEPCO identifies active and inactive deposits in this schedule along with an explanation of SWEPCO's policy for determining when a customer's deposit becomes inactive. SWEPCO does not have any inactive deposits because SWEPCO applies deposits to final billings or transfers deposits to a new account as appropriate.

F. RFP Schedule G – Accounting Information

Q. PLEASE DESCRIBE SCHEDULE G-1.

A. Schedule G-1 provides a narrative of SWEPCO's payroll practices.

Q. PLEASE DESCRIBE SCHEDULE G-1.1.

A. Schedule G-1.1 provides gross payroll information for each month in the test year as well as the three most recent calendar years prior to the test year, of 2016, 2017 and 2018. The schedule categorizes the information by regular payroll, overtime payroll, other and total payroll.

Q. PLEASE DESCRIBE SCHEDULE G-1.2.

A. Schedule G-1.2 provides gross payroll information for each month in the test year as well as the three most recent calendar years prior to the test year, of 2016, 2017 and 2018. The schedule categorizes the information by union payroll, non-union payroll, and total payroll.

Q. PLEASE DESCRIBE SCHEDULE G-1.3.

A. Schedule G-1.3 provides gross payroll information for each month in the test year as well as the three most recent calendar years prior to the test year, of 2016, 2017 and 2018. The schedule categorizes the information by payroll expensed, payroll capitalized, other payroll, and total payroll.

Q. PLEASE DESCRIBE SCHEDULE G-1.4.

A. Schedule G-1.4 provides the amount of payroll charged to joint owners of certain power plants operated by SWEPCO for each month in the test year as well as the three most recent calendar years prior to the test year, of 2016, 2017, and 2018. This schedule presents information for units in which there are joint owners, SWEPCO is the operator, and the joint owner reimburses SWEPCO for the payroll.

Q. PLEASE DESCRIBE SCHEDULE G-1.5.

A. Schedule G-1.5 provides an employee count for each month in the test year as well as the three most recent calendar years prior to the test year, of 2016, 2017, and 2018. The schedule categorizes the information by full-time employees, part-time employees and total employees.

Q. PLEASE DESCRIBE SCHEDULE G-1.6.

A. Schedule G-1.6 reports all payments other than standard pay or overtime pay made to employees for each month in the test year as well as the three most recent calendar years prior to the test year, of 2016, 2017, and 2018.

Q. PLEASE DESCRIBE SCHEDULE G-2.

A. Schedule G-2 provides a detailed description of all employee benefits requested in SWEPCO's cost of service. The schedule provides additional supporting documentation for each requested benefit. SWEPCO witness Carlin co-sponsors this schedule.

Q. PLEASE DESCRIBE SCHEDULE G-2.1.

A. Schedule G-2.1 provides a summary of SWEPCO's pension fund activity. The schedule includes SWEPCO's pension costs pursuant to SFAS No. 87 or ASC 715-30, actual pension payments to the fund, actuarial minimums and actuarial maximums, along with supporting documentation. As required by ASC 715-30 and actuary industry standards, Willis Towers Watson performed the valuation using reasonable actuarial methods and assumptions disclosed as Appendix A – Statement of actuarial assumptions, methods and data sources in the actuarial report included in EXHIBIT MAB-3. The actuary completed the 2020 actuarial report in September 2020.

Q. PLEASE DESCRIBE SCHEDULE G-2.2.

A. Schedule G-2.2 provides details concerning Other Post-Employment Benefits (SFAS 106 or ASC 715-60) expenses incurred in the test year and included in SWEPCO's cost of service.

Q. PLEASE DESCRIBE SCHEDULE G-2.3.

A. Schedule G-2.3 provides a schedule detailing employee benefit plan administration fees requested in SWEPCO's cost of service. Mr. Carlin co-sponsors this schedule.

Q. PLEASE DESCRIBE SCHEDULE G-3.

A. Schedule G-3 contains information concerning SWEPCO's bad debt expense including the method of calculating the monthly expense and SWEPCO's policy for writing off bad debts. Ms. Hawkins co-sponsors this schedule.

Q. PLEASE DESCRIBE SCHEDULE G-4.

A. This schedule presents a summary of advertising, contributions and donations, and organization memberships and dues expense subject to the 0.3% revenue limitation. The schedule includes the FERC account charged, category, schedule number that details the expense, and the test year expense. Schedules in the G-4 section have various co-sponsors including Mr. Bond and Mr. Frantz.

Q. PLEASE DESCRIBE SCHEDULE G-4.1 THROUGH G-4.1c.

A. Schedule G-4.1 provides a summary of advertising expense categorized by FERC account, category, schedule number, and test year expense. Schedules G-4.1a through G-4.1c provides a summary of expense for each category listed on G-4.1.

Q. PLEASE DESCRIBE SCHEDULE G-4.1d.

A. This schedule identifies the advertising costs capitalized by SWEPCO, which is zero.

Q. PLEASE DESCRIBE SCHEDULES G-4.2 THROUGH G-4.2c.

A. Schedule G-4.2 provides a summary of contribution and donation expenses in the following categories: educational; community service; and economic development. The schedule includes the FERC account charged, the description of the contribution, the schedule number that details the expense, and the test year amount. Schedules G-4.2a through G-4.2c report SWEPCO's educational, community service and economic development contributions and donations expense.

Q. PLEASE DESCRIBE SCHEDULES G-4.3 THROUGH G-4.3e.

A. Schedule G-4.3 provides a summary of membership dues or support expenses categorized by: industry organizations; business/economic organizations; professional organizations; social/recreational/religious organizations; and political organizations. The schedule includes the FERC account charged, the category, the schedule number that details the expense, and the test year amount. Also included are certain amounts that SWEPCO has excluded from its requested cost of service. Schedules G-4.3a through 4.3e provide: a summary of electric industry organization dues; business and economic dues; professional dues; social, recreational, fraternal or religious expenses; and political organization expenses, respectively.

Q. PLEASE DESCRIBE SCHEDULES G-5 THROUGH G-5.1b.

A. Schedule G-5 presents a summary of all test year expenditures in the categories of legislative advocacy expenses; penalties and fines; other exclusions; social/recreational/religious; and political. The schedule includes the description of the expenditure, the schedule number that details the expenditure, and the test year amount. Schedules G-5.1 through G-5.1b summarize legislative advocacy expense, payments made to individuals registered to lobby on behalf of SWEPCO during the test year and payments made to individuals or firms who monitored legislation for SWEPCO during the test year, respectively. SWEPCO is not requesting legislative advocacy expenses in the cost of service in accordance with PURA § 36.062.

Q. PLEASE DESCRIBE SCHEDULE G-5.2.

A. Schedule G-5.2 requires a summary of all penalties and fines included in SWEPCO's test year expense. SWEPCO is not requesting recovery of any fines or penalties in its cost of service.

Q. PLEASE DESCRIBE SCHEDULE G-5.3.

A. Schedule G-5.3 presents a summary of all test year expenditures referred to in 16 TAC § 25.231(b)(2) but not shown in Schedules G-4.3d, G-4.3e, G-5.1 and G-5.2. This schedule is not applicable to SWEPCO because expenditures referenced in the above rule are included in the schedules listed.

Q. PLEASE DESCRIBE SCHEDULE G-5.4.

A. Schedule G-5.4 provides exclusions from the cost of service by the PUC in SWEPCO's most recent rate case not resolved by settlement, if any, in the last five years.

Q. PLEASE DESCRIBE SCHEDULE G-5.5.

A. Schedule G-5.5 requests payments made during the test year and included in the cost of service for activities or services similar to those excluded from either of the two most recent rate cases not resolved by settlement. SWEPCO has not included any cost in its requested cost of service for activities or services similar to those excluded in its most recent case, Docket No. 46449 or 40443.

Q. PLEASE DESCRIBE SCHEDULES G-8.

A. This schedule presents information on all outside services employed during the test year that appear in the FERC 900 series accounts. The schedule shows the information as follows: column (1) is the FERC account; column (2) is the vendor sorted by category; column (3) is the purpose of the service; column (4) indicates whether the service is recurring or non-recurring; and column (5) is the amount. The schedule removes or normalizes the requested cost of service items of a non-recurring nature (with the exception of rate case expenses appropriately presented in Schedule G-14.1).

Q. PLEASE DESCRIBE SCHEDULE G-9.

A. This schedule shows the amount of taxes other than income taxes for the test year and the three most recent calendar years. The schedule also provides adjustments to the test year amounts and the total adjusted tax amount.

Q. PLEASE DESCRIBE SCHEDULE G-9.1.

A. Schedule G-9.1 reflects the ad valorem taxes assessed and the related plant balances for the test year and the three most recent calendar years.

Q. PLEASE DESCRIBE SCHEDULE G-10.

A. Schedule G-10 provides the following information related to SWEPCO's factoring expense: copies of the factoring agreements; the factoring expense calculation; calculation and narrative of the benefits to the customer; copies of monthly billings from the factor; and assurance that SWEPCO does not request both uncollectible expense and factoring expense. Ms. Hawkins co-sponsors this schedule.

Q. PLEASE DESCRIBE SCHEDULE G-11.

A. Schedule G-11 provides information concerning all amortization expense either included in the test year or requested in this filing. The schedule categorizes the information by:

- Authorizing docket;
- Original amount to be amortized;
- Deferral period;
- Amortization period;
- Date amortization began;
- Total amortization taken as of the beginning of the test year;
- Amortization expense for the test year ending March 31, 2020;

- Amortization expense included in the requested cost of service; and
- Unamortized amount as of the end if the test year.

Q. PLEASE DESCRIBE SCHEDULE G-12.

A. This schedule presents a complete analysis of all expenses charged "below the line" during the test year. SWEPCO eliminates "below the line" expenses as reflected in the workpapers (WP/G-12) for this schedule.

Q. PLEASE DESCRIBE SCHEDULE G-13.

A. This schedule indicates that the cost of service does not include nonrecurring or extraordinary expenses in the test year.

Q. PLEASE DESCRIBE SCHEDULE G-14.

A. Schedule G-14 details the various expenses charged to FERC Account 928 (Regulatory Expense) during the test year, SWEPCO's adjustments to the test year amount, and SWEPCO's request for each item.

Q. PLEASE DESCRIBE SCHEDULE G-14.1.

A. Schedule G-14.1 provides information concerning all requested rate case expenses for this current case, detailed by each type of expense.

Q. PLEASE DESCRIBE SCHEDULE G-14.2.

A. This schedule provides information concerning rate case expenses related to previous rate applications that the PUC has not considered.

Q. PLEASE DESCRIBE SCHEDULE G-15.

A. Schedule G-15 includes O&M expense for the test year. The schedule provides O&M expense by month, by account, and the total booked for the test year. This schedule also includes total adjusted O&M expense requested with subtotals by functional classification.

G. RFP Schedule H – Engineering Information

Q. PLEASE DESCRIBE SCHEDULES H-1 through H-1.2d.

A. These schedules provide detailed information related to the production plant O&M expenses for all power generating stations. Mr. McMahon co-sponsors or sponsors Schedules H-1 and H-1.2 through H-1.2d. Schedules H-1.1 through H-1.1a1 do not apply to SWEPCO because they request information concerning nuclear generating stations.

Q. PLEASE DESCRIBE SCHEDULE H-2.

A. This schedule requests that the information provided on Schedule H-1 be provided on an adjusted basis (adjusted for known and measurable changes). SWEPCO posted the pro forma adjustments directly to Schedule H-1 instead of repeating duplicate information on this schedule.

Q. PLEASE DESCRIBE SCHEDULE H-3.

A. Schedule H-3 reports the annual actual production O&M expense incurred for the years 2015 through 2019. Mr. McMahon sponsors this schedule.

Q. PLEASE DESCRIBE SCHEDULES H-5.1 THROUGH H-5.3B.

A. Schedule H-5.1 describes the methods and criteria used to select and determine what and how unit improvements, modifications, and repairs become capitalized costs. Schedule H-5.2b provides a listing of production plant capital additions included in rate base since the last rate case. Schedule H-5.3b provides a listing of actual and projected capital expenditures of $100,000 or more for a nine year period; the five years prior to the test year; the test year; and the next three years. Schedules H-5.2a and H-5.3a do not apply to SWEPCO because they request information concerning nuclear generating stations. Mr. McMahon co-sponsors Schedules H-5.2b and H-5.3b.

Q. PLEASE DESCRIBE SCHEDULES H-11.1 AND 11.3.

A. Schedule H-11.1 provides the percent of production plant expenses for each power plant site for the years 2015 through 2019 and the test year. Schedule H-11.3 provides O&M cost per MWh for each power plant site for the years 2015 through 2019 and the test year.

H. RFP Schedule I-1.1 – Fuel by Account Number

Q. PLEASE DESCRIBE SCHEDULE I-1.1.

A. Schedule I-1.1 provides fuel expense by account by month for the test year. The schedule separates the amounts between fixed, variable and semi-variable.

Q. PLEASE DESCRIBE SCHEDULE I-1.4.

A. Schedule I-1.4 states there are no nonrecurring fuel and purchased power expenses.

Q. WHAT DOES SCHEDULE I-5.3 PROVIDE?

A. Schedule I-5.3 provides combustion residual disposal costs, revenues and tons sold by month for the test year. Mr. McMahon co-sponsors this schedule.

I. RFP Schedule J – Financial Statements

Q. PLEASE DESCRIBE SCHEDULE J.

A. This schedule provides the financial statements considered necessary for presentation of SWEPCO's financial position in accordance with GAAP. The statements provided are the Income Statement, Balance Sheet, Retained Earnings and Statement of Cash Flows for both the test year and the twelve months immediately preceding the test year. Also included are the footnotes to the financial statements.

Q. PLEASE DESCRIBE SCHEDULE J-1.

A. This schedule requires a reconciliation of the balance sheet and the income statement presented on a total company basis in Schedule J to the same information on a total electric basis. This schedule does not apply to SWEPCO since SWEPCO has only electric operations.

Q. PLEASE DESCRIBE SCHEDULE J-2.

A. This schedule provides the consolidated financial statements for AEP, the parent of SWEPCO.

J. RFP Schedule S – Test Year Review

Q. PLEASE DESCRIBE SCHEDULE S.

A. On June 9, 2020, in Docket No. 50917, SWEPCO filed an application requesting a good cause waiver of the requirement that it file RFP Schedule S and perform the related audit required by Schedule S. Cities Advocating Reasonable Deregulation (CARD) intervened in support of the requested waiver and, on July 31, 2020, Commission Staff recommended the Commission approve SWEPCO's application.

SWEPCO and Commission Staff filed an agreed proposed notice of approval on August 12, 2020. No party has raised an objection to SWEPCO's waiver application.

K. RFP Schedule V – Request for Waiver of RFP Requirements

Q. PLEASE DESCRIBE SCHEDULE V.

A. This schedule requires SWEPCO to indicate requirements of the RFP with which the filed schedules do not comply and the reason for such non-compliance. As noted earlier, SWEPCO has received a waiver for Schedule S per the ordering paragraph in Docket No. 45886. In addition, SWEPCO seeks a waiver for various fuel reconciliation schedules since SWEPCO is not seeking to reconcile fuel in this proceeding. The appropriate fuel reconciliation schedules will be filed in the appropriate fuel reconciliation proceeding.

V. RATE-CASE EXPENSES

Q. WHAT ARE THE RATE-CASE EXPENSES SWEPCO IS PROPOSING TO RECOVER IN THIS PROCEEDING?

A. SWEPCO is seeking recovery of the reasonable rate-case expenses, including expenses paid to reimburse intervening municipalities, that it incurs in this case and those rate-case expenses incurred in the following prior dockets:

- Docket No. 49042, SWEPCO's most recent TCRF filing;
- Docket No. 46449 (appellate expenses for SWEPCO's most recently completed base rate case); and
- Docket No. 40443 (appellate expenses).

Q. WHAT TYPES OF COSTS ARE INCLUDED IN THE RATE-CASE EXPENSES PROPOSED FOR RECOVERY IN THIS CASE?

A. SWEPCO expects to incur four categories of costs: outside consultants; outside legal counsel; cities' expenses; and miscellaneous and employee expenses, which includes expenses for printing, temporary employees, other miscellaneous items, and travel-related expenses.

Q. WHAT PRACTICES AND PROCEDURES DOES SWEPCO USE TO ENSURE THE REASONABLENESS AND NECESSITY OF RATE-CASE EXPENSES?

A. Exhibit LFN-4 to the direct testimony of SWEPCO witness Ferry-Nelson provides the detailed description of the practices and procedures employed by SWEPCO to control and manage rate-case expenses and to ensure that the requested rate-case expenses are reasonable and necessary.

Q. HOW DID SWEPCO DERIVE THE INCLUDED AMOUNTS?

A. SWEPCO derives the amounts from the books and records of the Company. For each of the above proceedings, SWEPCO established a project to track the actual costs incurred for the proceeding to ensure none of the expenses at issue in this case are recovered through base rates or another recovery mechanism. SWEPCO accumulated, reviewed, and adjusted the costs charged to the projects so that only appropriate incremental costs are included in the requested amount. In other words, if these proceedings had not occurred, SWEPCO would not have incurred these expenses. In addition, no payroll- or benefits-related costs of AEPSC or SWEPCO employees or internal overhead costs are included the Company's requested rate-case expenses.

Q. IS THERE A SUMMARY OF THESE EXPENSES?

A. Yes, Exhibits LFN-1 and LFN-2, attached to the direct testimony of Ms. Ferry-Nelson, provide a summary for each of the dockets. The amounts represent actual amounts incurred through the end of July 2020. As explained by Ms. Ferry-Nelson, SWEPCO will supplement Exhibits LFN-1 and LFN-2 to reflect its actual incremental expenses for this case and the prior dockets as additional expenses are incurred and recorded to SWEPCO's books and records.

Q. HAS THE COMPANY FILED SUPPORTING DOCUMENTS?

A. Yes, the Company has supplied in Exhibits LFN-1 and LFN-2 to Ms. Ferry-Nelson's testimony, the historical costs, invoices, expense accounts and other supporting documentation to support the various rate-case expenses incurred in the processing of these dockets. The Company has followed the standard documentation process used in previous rate-case expense filings and accepted by Staff and the Commission as sufficient documentation of substantially all expenses submitted in those filings.

Q. CAN YOU FURTHER EXPLAIN THAT DOCUMENTATION PROCESS AS IT RELATES TO EMPLOYEE AND OTHER MISCELLANEOUS EXPENSES?

A. The Company's documentation process follows American Electric Power's Travel and Entertainment Policy Guide attached to this testimony as EXHIBIT MAB-6. Company policy requires receipts for all items over $26, including but not limited to airfare, rental cars, meals, hotel charges, taxis/shuttles, fuel, and parking. In addition to receipts, the Company credit card documentation identifies the expenses as incurred, also indicating type such as airfare, meals, etc. For items under $26, the data provided to support the expenses is the direct output from the credit card transactions within the accounting system, and therefore reflects exactly the same information regarding each expense transaction recorded when first incurred and the credit card utilized. Thus, the detail provided in support of expenses by SWEPCO is comparable to that which would be on the credit card receipt. In this filing, SWEPCO has supplied documentation consistent with Company policy and past rate case filings before the PUC. The American Electric Power Travel and Entertainment Policy Guide attached as EXHIBIT MAB-6 provides additional information regarding travel expenses.

Q. IN PARTICULAR, WHAT LEVEL OF DETAIL DOES SWEPCO PROVIDE?

A. SWEPCO provides multiple layers of detail. At the highest level, SWEPCO summarizes expenses by proceeding with categories of legal, consulting, auditor, employee, other and municipal expenses. From there, SWEPCO provides third-party expenses by vendor and individual voucher. They also detail employee expenses by individual transaction with a description of the type of expense such as airfare, parking, meal and the individual that incurred the expense. The final level of detail is support for individual transactions, whether a copy of the individual voucher, or the employee's expense report. As required by AEP and the IRS, SWEPCO provides individual receipts for certain employee expenses.

Q. DID SWEPCO MAKE ANY ADJUSTMENTS TO THE ACTUAL AMOUNTS INCURRED BY THE COMPANY?

A. Yes. SWEPCO made adjustments for consistency with prevailing PUC guidelines for recovery of rate-case expenses to adhere to the following standards:

- No meal charges in excess of $25 per person have been included in the requested rate-case expenses;
- No luxury charges, such as alcohol, valet parking, limousine service, movies, etc., are included;
- No first class airfare charges and no charges for non-commercial aircraft are included in the requested expenses; and
- No luxury hotel accommodations such as "five star hotels" are included in the requested expenses.

VI. CONCLUSION

Q. PLEASE STATE YOUR CONCLUSIONS.

A. SWEPCO's requested cost of service and rate base are an accurate reflection of costs appropriately adjusted and presented in accordance with the Commission rules. The pro forma adjustments contained in this filing are appropriate and reflect the regulatory treatment intended. Based on the evidence provided in my testimony and that of other SWEPCO witnesses, SWEPCO has supported its cost of service and related base rate revenue deficiency.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

SOUTHWESTERN ELECTRIC POWER COMPANY
RFP Schedules supported by Michael A Baird

Line No	Schedule	Description	Sponsor
1	A	Overall Cost of Service	Baird
2	A-1	Cost of Service - Texas Retail	Baird / Aaron
3	A-2	Cost of Service Detail by Acct	Baird / Aaron
4	A-3	Adjustments to Test Year	Baird
5	A-4	Detail TYE Trial Balance	Baird
6	A-5	Unadjusted O&M	Baird
7	B-1	Rate Base and Return - Total	Baird
8	B-1.1	Texas Retail	Baird / Aaron
9	B-1 2	Percentage of Plant in Service	Baird
10	B-1.3	Penalties or Fines	Baird
11	B-1.4	Post Test Year Adjustments	Baird
12	B-1 5	Adjustments to Rate Base & Return	Baird
13	B-2	Accumulated Provision Balances	Baird
14	B-2.1	Accumulated Provision Policies	Baird
15	C-1	Original Cost of Utility Plant	Baird
16	C-2	Detail of Original Cost of Utility Plant	Baird
17	C-3	Monthly Detail of Utility Plant in Service	Baird
18	C-4 1	CWIP by Functional Group	Baird
19	C-4 2	CWIP Allowed in Rate Base	Baird
20	C-5	AFUDC or Interest During Construction	Baird
21	D-1	By Functional Group and/or Primary Acct	Baird
22	D-3	Plant Held for Future Use	Baird
23	D-4	Depreciation Exp. & Amortization Exp	Baird / Cash
24	E-1	Monthly Balances of Short Term Assets	Baird
25	E-1 1	Detail of Short Term Assets	Baird
26	E-1 2	Obsolete Assets	Baird
27	E-1 3	Short Term Assets Policies	Baird
28	E-4	Working Cash Allowance	Baird
29	E-5	Prepayments & Materials & Supplies	Baird
30	E-6	Customer Deposits	Baird
31	G-1	Payroll Information	Baird
32	G-1 1	Regular and Overtime Payroll	Baird
33	G-1 2	Regular Payroll by Category	Baird
34	G-1.3	Payroll Capitalized vs Expensed	Baird
35	G-1 4	Payroll by Company	Baird
36	G-1.5	Number of Employees	Baird
37	G-1 6	Payments Other Than Standard Pay	Baird
38	G-2	General Employee Benefit Information	Carlin / Baird
39	G-2 1	Pension Expense	Baird
40	G-2 2	Post Retirement Benefits Other Than Pension	Baird
41	G-2 3	Administration Fees	Carlin / Baird
42	G-3	Bad Debt Expense	Hawkins / Baird
43	G-4	Summary of Advertising, Contributions & Dues	Bond / Baird / Frantz
44	G-4 1	Summary of Advertising Expense	Bond / Baird / Frantz
45	G-4 1a	Summary of Information/Instructional Advertising	Bond / Baird / Frantz
46	G-4 1b	Summary of Advertising to Promote & Retain Usage	Bond / Baird / Frantz
47	G-4 1c	Summary of General Advertising Expense	Bond / Baird / Frantz
48	G-4.1d	Capitalized Advertising	Bond / Baird / Frantz
49	G-4 2	Summary of Contribution and Donation Expense	Bond / Baird / Frantz
50	G-4.2a	Summary of Educational Contributions/Donations	Bond / Baird / Frantz
51	G-4.2b	Summary of Community Service Contributions and Donations	Bond / Baird / Frantz
52	G-4 2c	Summary of Economic Development Contributions & Donations	Bond / Baird / Frantz
53	G-4 3	Summary of Membership Dues Expense	Bond / Baird / Frantz
54	G-4 3a	Summary of Industry Organization Dues	Bond / Baird / Frantz
55	G-4 3b	Summary of Business/Economic Dues	Bond / Baird / Frantz
56	G-4 3c	Summary of Professional Dues	Bond / Baird / Frantz
57	G-4 3d	Summary of Social, Recreational, Fraternal or Religious Expenses	Bond / Baird / Frantz
58	G-4 3e	Summary of Political Organization Expenses	Bond / Baird / Frantz

SOUTHWESTERN ELECTRIC POWER COMPANY
RFP Schedules supported by Michael A Baird

Line No	Schedule	Description	Sponsor
59	G-5	Summary of Exclusions from Test Year Expense	Baird
60	G-5 1	Analysis of Legislative Advocacy	Bond / Baird
61	G-5.1a	Payments to Registered Lobbyists	Bond / Baird
62	G-5.1b	Payments for Monitoring Legislation	Bond / Baird
63	G-5 2	Summary of Penalties and Fines	Baird
64	G-5 3	Other Exclusions	Baird
65	G-5.4	Analysis of Prior Rate Case Exclusions	Baird
66	G-5 5	Comparison of Prior Rate Case Exclusions to Current	Baird
67	G-8	Outside Services Employed - FERC 900 Series Expenses	Baird
68	G-9	Taxes Other Than Income Tax	Baird
69	G-9.1	Ad Valorem Taxes & Plant Balances (+ last 3-calendar yrs)	Baird
70	G-10	Factoring Expense	Hawkins / Baird
71	G-11	Deferred Expenses from Prior Dockets	Baird
72	G-12	Below the Line Expenses	Baird
73	G-13	Nonrecurring and Extraordinary Items	Baird
74	G-14	Regulatory Commission Expense	Baird
75	G-14 1	Rate Case Expenses	Baird
76	G-14 2	Rate Case Expenses - Prior Rate Applications	Baird
77	G-15	Monthly O&M Expense	Baird
78	H-1	Summary of Test Year Production O&M Expenses	Baird / McMahon
79	H-1.2	Fossil Company-wide O&M Expenses Summary	Baird / McMahon
80	H-1.2a	Natural Gas Plant O&M Summary	Baird / McMahon
81	H-1 2a1	Natural Gas (Steam Generation)	Baird / McMahon
82	H-1.2a2	Natural Gas (Combustion Turbine)	Baird / McMahon
83	H-1.2b	Coal Plant O&M Summary	Baird / McMahon
84	H-1.2c	Lignite Plant O&M Summary	Baird / McMahon
85	H-1 2d	Other Plant O&M Summary	Baird / McMahon
86	H-2	Summary Adjusted Test Year Production O&M Expenses	Baird / McMahon
87	H-3	Summary of Actual Production O&M Expenses Incurred	Baird / McMahon
88	H-5.1	Capital Cost Methodology	Baird
89	H-5.2b	Fossil Capital Costs Projects	McMahon / Baird
90	H-5 3b	Fossil Capital Expenditures (Historical, Present, Projected)	McMahon / Baird
91	H-11 1	O&M Expenses per Production Plant Expenses in Percent	Baird / McMahon
92	H-11 3	O&M Cost per MWh	Baird / McMahon
93	I-1 1	Fuel by Account Number	Baird
94	I-1 4	Nonrecurring Fuel and Purchased Power Expenses	Baird
95	I-5 3	Combustion Residual Disposal Costs	McMahon / Baird
96	J	Financial Statements	Baird
97	J-1	Reconciliation. Total Company to Total Electric	Baird
98	J-2	Consolidated Financial Statements	Baird
99	S-1	Scope of Review	Waived
100	S-2	Errors and Exceptions Noted by Independent Accountants	Waived
101	S-3	Communications with Independent Accountants	Waived
102	S-4	Adjusting Journal Entries	Waived
103	S-5	Passed Adjusting Journal Entries	Waived
104	S-6	Workpaper Review	Waived

SOUTHWESTERN ELECTRIC POWER COMPANY
SCHEDULE OF PROFORMA ADJUSTMENTS
FOR THE TEST YEAR ENDED 3/31/09

Line No	Proforma Number	Proforma Description	Amount	Sponsor
1	Adjustments to Cost of Service			
2	A-3.1	Adjust cost of service for payroll annualization	2,143,713	Carlin/Baird
3	A-3.2	Adjust cost of service for incentive compensation	(3,866,220)	Carlin/Baird
4	A-3.3	Adjust cost of service for long term incentive plan	(504,872)	Carlin/Baird
5	A-3.4	Adjust depreciation expense to reflect proposed rates	14,414,642	Baird/Cash
6	A-3.5	Annualize factoring expense based on test year ending adjusted revenue and factoring rate	(1,296,219)	Baird/Hawkins
7	A-3.6	Remove costs recovered under riders and any other over/under entries	(17,779,451)	Baird
8	A-3.7	O&M Expenses - Retired Power Plants	(616,316)	Baird/McMahon
9	A-3.8	Annualize Amortization Expense	2,505,487	Baird
10	A-3.9	Include credit line fees in cost of service	696,993	Baird/Hawkins
11	A-3.10	Adjust pension expense to reflect ASC 715-30 Pension actuarial expense	2,649,813	Baird
12	A-3.11	Adjust cost of service to reflect ASC 715-60 Other Post-Retirement Benefits actuarial expense	546,861	Baird
13	A-3.12	Adjust cost of service to reflect ASC 712-10 Post-Employment Benefits actuarial expense	(275,815)	Baird
14	A-3.13	Adjust taxes other than income taxes	(4,666,863)	Baird
15	A-3.14	Adjust donations, dues, advertising, employee expenses, non-recurring	969,409	Bond/Baird
16	A-3.15	Remove USWAG Dues	(489)	Baird
17	A-3.16	Adjust Storm Expense	(4,698,493)	Baird
18	A-3.17	Adjust for Independent Power Producer (IPP) Interest expenses	373,615	Baird
19	A-3.18	Adjust cost of service related for AEPSC affiliated charges	(7,549,238)	Frantz
20	A-3.19	Adjust cost of service for regulatory expenses	(757,823)	Baird
21	A-3.20	Vegetation Management	5,000,000	Seidel
22	A-3.21	Adjust State Income and Gross Margin Taxes	406,190	Baird
23	A-3.22	Adjust cost of service to include interest on customer deposits	1,438,097	Baird
24	A-3.23	Adjust federal income tax to reflect revenue requirement	26,121,280	Hodgson
25	A-3.24	Eliminate provision for rate refunds	(52,703,884)	Baird
26	A-3.25	Miscellaneous Expense Removal	(129,843)	Baird
27	A-3.26	Adjust base revenues and remove fuel and other rider revenues in cost of service	681,355,604	Baird
28	A-3.27	Remove reconcilable fuel expense from cost of service	(600,093,747)	Baird
29	A-3.28	Adjust miscellaneous revenues in cost of service	(73,586,953)	Aaron

SOUTHWESTERN ELECTRIC POWER COMPANY
SCHEDULE OF PROFORMA ADJUSTMENTS
FOR THE TEST YEAR ENDED 3/31/09

Line No.	Proforma Number	Proforma Description	Amount	Sponsor
		Adjustments to Rate Base		
1	B-1 5 1	Remove capital leases from plant in service	(74,777,296)	Baird
2	B-1 5 2	Remove CWIP from plant in service	(226,392,894)	Baird
3	B-1 5.3	Adjust materials and supplies balance to reflect 13 month average	(913,340)	Baird
4	B-1 5.4	Adjust accumulated depreciation for effect of rate differential	224,168,719	Baird
5	B-1 5 5	Adjust plant held for future use from rate base	(823,186)	Baird
6	B-1 5 6	Remove plant acquisition adjustment from rate base	-	Baird
7	B-1 5 7	Adjust fuel inventories to requested balances	(19,211,748)	Jeffries
8	B-1 5 8	Include O&M portion of prepaid pension and prepaid post-retirement in rate base	83,452,444	Baird
9	B-1.5.9	Adjust accumulated deferred income taxes	291,719,533	Hodgson
10	B-1 5 10	Adjust AFUDC closed to plant for CWIP in rate base jurisdictional differences	55,514,899	Baird
11	B-1 5 11	Reverse elimination of generation cost of removal associated with implementation of SFAS 143	(13,389,353)	Cash/Baird
12	B-1 5 12	Omitted	-	Baird
13	B-1.5 13	Mine reclamation	(64,960,236)	Baird
14	B-1 5.14	Include Investment in Oxbow	16,576,181	Baird
15	B-1.5.15	Remove Dolet mining ARO from rate base	(52,053,641)	Baird
16	B-1.5.16	Removes amounts in FERC Account 102, electric plant purchased or sold	(64,005)	Baird
17	B-1.5.17	Dolet Hills Power Station	(82,311,412)	Baird

WillisTowersWatson

American Electric Power Co.

American Electric Power System Retirement Plan

Actuarial Valuation Report

Employer Contributions for Plan Year Beginning January 1, 2020
Benefit Cost for Fiscal Year Beginning January 1, 2020 under US GAAP

September 2020

Table of Contents

Purposes of valuation

American Electric Power Co. (AEP or the Company) retained Willis Towers Watson US LLC ("Willis Towers Watson"), to perform an actuarial valuation of the American Electric Power System Retirement Plan for the purpose of determining the following:

1. The minimum required contribution in accordance with ERISA and the Internal Revenue Code (IRC) for the plan year beginning January 1, 2020.
2. The estimated maximum tax-deductible contribution for the tax year in which the 2020 plan year ends in accordance with ERISA as allowed by the IRC. The maximum tax-deductible contribution should be finalized in consultation with the Company's tax advisor.
3. Plan accounting information in accordance with FASB Accounting Standards Codification Topic 960 (ASC 960).
4. An assessment of ERISA §4010 reporting requirements for the plan for 2020.
5. Determination of the Funding Target Attainment Percentage (FTAP) under IRC §430(d)(2), as reported in the Annual Funding Notice required under ERISA §101(f).
6. The value of benefit obligations as of January 1, 2020 and American Electric Power Co.'s pension cost for fiscal year ending December 31, 2020 in accordance with FASB Accounting Standards Codification Topic 715 (ASC 715-30).
7. As requested by American Electric Power Co., a "specific certification" of the Adjusted Funding Target Attainment Percentage (AFTAP) for the American Electric Power System Retirement Plan under IRC §436 for the plan year beginning January 1, 2020. Please see Section 4 for additional information. Note that the AFTAP certification included herein may be superseded by a subsequent AFTAP certification for the American Electric Power System Retirement Plan for the plan year beginning January 1, 2020.

Limitations

This valuation has been conducted for the purposes described above and may not be suitable for any other purpose. In particular, please note the following:

1. This report does not determine the plan's liquidity shortfall requirements (if any) under IRC §430(j)(4). If applicable, we will determine such requirements separately as requested by the Company.
2. This report does not present liabilities on a plan termination basis, for which a separate extensive analysis would be required. No funded status measure included in this report is intended to assess, and none may be appropriate for assessing, the sufficiency of plan assets to cover the

estimated cost of settling the plan's benefit obligations, as all such measures differ in some way from plan termination obligations. For example, measures shown in this report may reflect smoothed assets or interest rates, rather than current values, in accordance with funding and accounting rules. In addition, funded status measures shown in this report do not reflect the current costs of settling the plan obligations by offering immediate lump sum payments to participants and/or purchasing annuity contracts for the remaining participants (e.g., insurer profit, insurer pricing of contingent benefits and/or provision for anti-selection in the choice of a lump sum vs. an annuity).

3. The cost method for the minimum required contribution is established under IRC §430 and may not in all circumstances produce adequate assets to pay benefits under all optional forms of payment available under the plan when benefit payments are due.

4. The comparison of the plan's funding target to its actuarial value of assets (the funding shortfall (surplus) shown in Section 1) is used in determining required contributions for the coming year, and a contribution made on the valuation date equal to the shortfall would be considered to "fully fund" the plan for benefits accrued as of the valuation date under the funding rules, and thus is useful for assessing the need for and amount of future contributions. However, the funding shortfall (surplus) cannot be relied upon to determine either the need for or the amount of future contributions. The funding shortfall (surplus) is based on the interest rates elected to be used for funding purposes, which may be smoothed rates not reflecting current market conditions and will in any event change over time. It is also based on the actuarial value of assets, so if an asset smoothing method is used, it would be different than if based on market value of assets. In addition, asset gains and losses, demographic experience different from assumed, and future benefit accruals (if any) will all affect the need for and amount of future contributions.

5 There may be certain events that occurred since the valuation date that are not reflected in this valuation. See Subsequent Events (under the "Basis for valuation" portion of Section 1 below) for more information.

6. This valuation reflects our understanding of the relevant provisions of the Pension Protection Act of 2006 (PPA); the Worker, Retiree and Employer Recovery Act of 2008 (WRERA); the Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010 (PRA); the Moving Ahead for Progress in the 21st Century Act (MAP-21); the Highway and Transportation Funding Act of 2014 (HATFA); and the Bipartisan Budget Act of 2015. The IRS has yet to issue final guidance with respect to certain aspects of these laws. It is possible that future guidance may conflict with our understanding of these laws based on currently available guidance and could therefore affect results shown in this report.

Section 1: Summary of results

Summary of valuation results

All monetary amounts shown in US Dollars

Plan Year Beginning	01/01/2020	01/01/2019
Funding		
Market value of plan assets with discounted receivable contributions	5,156,584,961	4,701,727,981
Actuarial value of plan assets	5,096,276,699	4,830,563,331
Funding balances	1,039,541,348	890,207,591
Funding target	4,277,258,567	4,247,381,107
Target normal cost	101,389,545	94,230,563
Funding shortfall (surplus)	220,523,216	307,025,367
Funding target attainment percentage (FTAP)	94 84%	92.77%
Minimum required contribution		
Prior to application of funding balances	101,389,545	94,230,563
Net of available funding balances	0	0
Effective interest rate	5 25%	5.43%
U.S. GAAP Accounting (ASC 715) as of Measurement Date	**01/01/2020**	**01/01/2019**
Projected benefit obligation (PBO)	5,195,567,256	4,777,757,677
Fair value of plan assets, excluding receivable contributions	5,049,268,887	4,701,727,981
Funded status	(146,298,369)	(76,029,696)
Pension cost (excluding effects of settlements, curtailments and termination benefits) for fiscal year	103,600,934	56,971,973
Benefit cost/(income) due to special events	0	0
Total benefit cost/(income)	103,600,934	56,971,973
Discount rate	3.25%	4.30%
Participants as of Census Date	**01/01/2020**	**01/01/2019**
Active employees	16,655	16,673
Participants with deferred benefits	3,575	3,535
Participants receiving benefits	15,017	15,206
Total	35,247	35,414
Plan Accounting (ASC 960)	**01/01/2020**	**01/01/2019**
Present value of accumulated benefits	3,974,519,757	3,847,849,173
Market value of plan assets with receivable contributions	5,160,806,887	4,701,727,981
Plan accounting discount rate	5.75%	6 25%

Minimum required contribution and funding policy

All monetary amounts shown in US Dollars

Plan Year Beginning	01/01/2020	01/01/2019
Minimum Required Contribution (MRC)		
Prior to application of funding balances	101,389,545	94,230,563
Net of available funding balances	0	0
Sponsor's Funding Policy Contribution	TBD	111,538,000

The plan sponsor's funding policy generally has been to contribute the greater of the ASC 715 service cost or the minimum required contribution. We understand the sponsor may deviate from this policy based on cash, tax or other considerations.

The minimum required contribution includes a contribution to cover the benefits expected to accrue in the coming year (if any) plus any expenses expected to be paid from the trust in the coming year (target normal cost), as well as a 7-year amortization (with a somewhat longer amortization period for shortfall amortization bases established in any year for which funding relief was elected) of any funding shortfall (amortization installments) (See Section 2.4 for a break-down of the minimum required contribution into target normal cost and amortization installments, and see Section 2.5 for a schedule of amortization installments for future years.) Thus, assuming that all actuarial assumptions are realized and do not change and the plan sponsor contributes the minimum required contribution each year (target normal cost plus amortization installments), the plan would generally be expected to be fully funded in 7 years, and the minimum required contribution would be expected to drop to target normal cost. During the 7 year period, there will be some variability in minimum required contributions due to amortization installments from prior years dropping out as the 7-year amortization period ends (and for deferred asset gains or losses becoming reflected in assets if an asset smoothing method is used for the actuarial value of assets) In reality, gains and losses will occur, and the plan sponsor may fail to contribute the minimum required contribution (or may contribute more than the minimum required contribution in accordance with the funding policy described above), which may cause the plan to take more or less than 7 years to become fully funded Note that being fully funded under the funding rules is not the same as being fully funded on a plan termination basis, as different assumptions apply (e.g., the cost of annuity contracts or lump sums to participants) on plan termination

Target normal cost for individual participants accruing benefits will grow from year to year as participants age (and as their salaries increase, if benefit accruals are pay related), but the changes in total target normal cost will depend on the numbers of participants earning benefits and their ages. Because the number and ages of active participants covered by the plan are not expected to change significantly from year to year, target normal cost is expected to increase as salaries increase. Of course, changes in discount rates and other assumptions in future years will also influence the pattern of future required contributions.

The minimum required contribution for the 2020 plan year must be partially satisfied in quarterly installments during the plan year, with a final payment due by September 15, 2021. These requirements may be satisfied through contributions and/or an election to apply the available funding balances. The minimum required contribution is determined assuming it is paid as of the valuation date for the plan year Contributions made on a date other than the valuation date must be adjusted for interest at the plan's effective interest rate. The minimum funding schedule, before reflecting any funding balance elections or amounts already contributed for the 2020 plan year prior to the issuance of this report, is shown below

All monetary amounts shown in US Dollars

Due Date	Amount
April 15, 2020 [1]	22,812,648
July 15, 2020 [1]	22,812,648
October 15, 2020 [1]	22,812,648
January 15, 2021	22,812,648
September 15, 2021	14,379,353

[1] Payment of contributions due during 2020 can be delayed to December 31, 2020 per the CARES Act

Because the plan has a funding shortfall, quarterly contributions for the 2021 plan year will be required.

The preliminary minimum funding schedule for the 2021 plan year, before reflecting any funding balance elections, is shown below:

All monetary amounts shown in US Dollars

Plan Year	2021
Preliminary Schedule of Minimum Funding Requirements	
April 15, 2021	25,347,386
July 15, 2021	25,347,386
October 15, 2021	25,347,386
January 15, 2022	25,347,386
September 15, 2022	To be determined by 2021 valuation

The final schedule will be based on the 2021 valuation, but the final quarterly contributions will not be more than the amounts shown above.

Change in minimum funding requirement and funding shortfall (surplus)

The minimum funding requirement increased from $94,230,563 for the 2019 plan year to $101,389,545 for the 2020 plan year, and the funding shortfall (surplus) declined from $307,025,367 on January 1, 2019 to $220,523,216 on January 1, 2020.

Significant reasons for these changes include the following:

- The investment experience was more favorable than expected, which decreased the minimum funding requirement and the funding shortfall.
- The plan's effective interest rate decreased 18 basis points compared to the prior year, which increased the minimum funding requirement and the funding shortfall.
- The mortality projection scale was updated for an additional year of mortality improvement, as required by IRC §430, which increased the funding requirement and the funding shortfall.
- Mortality experience less favourable to the plan than anticipated and salary increases greater than anticipated increased the minimum funding requirement and the funding shortfall.

Funding ratios

The Pension Protection Act of 2006 (PPA) defines several Funding Ratios. All of these ratios are based on a ratio of plan assets to plan liabilities, but the assets and liabilities are defined differently for different purposes. Depending on the purpose, the assets may be market value or, if different, a smoothed actuarial value of assets, and may be reduced by the prefunding balance or all funding balances. The liabilities may be based on the funding target, funding target disregarding at-risk assumptions, or the funding target calculated using at-risk assumptions (see the At-Risk status section below), and may or may not reflect stabilized interest rates.

Following are the key funding ratios and their implications for the 2020 or 2021 plan years. See Appendix D for details on how each ratio is calculated.

January 1, 2019 Funding ratios

	Ratio Test Implications	Threshold	Ratio Value
1	Funding balances can be used to satisfy the 2020 Minimum Required Contribution (MRC) if threshold met	80%	96 73%
2	Quarterly contribution exemption applies in 2020 if threshold met	100%	92 77%
3	Plan is not at-risk for 2020 if the threshold for either the Prong 1 or Prong 2 test is met		
	- Prong 1 Test	80%	92.77%
	- Prong 2 Test	70%	N/A

January 1, 2020 Funding ratios

	Ratio Test Implications	Threshold	Ratio Value
1	Funding balances can be used to satisfy the 2021 MRC if threshold met	80%	99 40%
2	Quarterly contribution exemption applies in 2021 if threshold met	100%	94.84%
3	Plan is not at-risk for 2021 if the threshold for either the Prong 1 or Prong 2 test is met		
	- Prong 1 Test	80%	94 84%
	- Prong 2 Test	70%	N/A
4	PBGC 4010 filing may be required in 2021 if threshold is not met by every plan in the controlled group	80%	85.76%
5	Plan is exempt from creating a new Shortfall Amortization Base (SAB) for 2020 when prefunding balance <u>is</u> applied to the 2020 MRC if threshold met	100%	99 40%
6	Plan is exempt from creating a new SAB for 2020 when prefunding balance <u>is not</u> applied to the 2020 MRC if threshold met	100%	119 14%
7	Previously established SABs are eliminated for 2020 if threshold met	100%	94 84%

Benefit limitations

The Adjusted Funding Target Attainment Percentage (AFTAP) for the plan year beginning January 1, 2020 is 119.14%. This AFTAP may be changed by subsequent events.

Under the PPA, a plan may become subject to various benefit limitations if its AFTAP falls below certain thresholds

If the AFTAP is below 60% (100%, calculated ignoring stabilized interest rates, if the plan sponsor is in bankruptcy), plans are prohibited from paying lump sums or other accelerated forms of distribution (such as Social Security level payment options). If the AFTAP is at least 60% but less than 80%, the amounts that can be paid are limited. In addition, lump sums to the 25 highest paid employees may be restricted if a plan's AFTAP is below 110%. These limitations do not apply to mandatory lump sum cash-outs of $5,000 or less. In addition, plans that were completely frozen before September 2005 are exempt from the restrictions on lump sums and other accelerated forms of distribution.

If the AFTAP is below 60%, benefit accruals must cease, amendments to improve benefits cannot take effect, and plant shutdown benefits and other Unpredictable Contingent Event Benefits (UCEBs) cannot be paid without being fully paid for. In addition, if the AFTAP would be below 80% reflecting a proposed amendment, the plan amendment cannot take effect unless actions are taken to increase plan assets.

To avoid these benefit limitations, a plan sponsor may take a variety of steps, including reducing the funding balances, contributing additional amounts to the plan for the prior plan year, contributing special "designated IRC §436 contributions" for the current plan year, or providing security outside the plan. Not all of these approaches are available for all of the restrictions discussed above. For example, restrictions on accelerated distributions cannot be avoided by making designated IRC §436 contributions.

As requested by American Electric Power Co. in your letter dated September 25, 2020, this report is intended to constitute a "specific certification" of the AFTAP, effective as of September 28, 2020, for the plan year beginning January 1, 2020 for the purpose of determining benefit restrictions under IRC §436 for the American Electric Power System Retirement Plan. This AFTAP certification is based on the data, methods, assumptions, plan provisions, annuity purchase information, and other information provided in this report. Please see the Appendices for additional information. Note that the AFTAP certification provided herein may be superseded by a subsequent AFTAP certification for the plan year beginning January 1, 2020. Please see Section 4 for a discussion of the implications of this certified AFTAP.

PBGC reporting requirements

Certain financial and actuarial information (i.e., a "4010 filing") must be provided to the PBGC if the PBGC Funding Target Attainment Percentage (PBGC FTAP) is less than 80% for any plan in the contributing sponsor's controlled group However, this reporting requirement may be waived for controlled groups with no more than $15 million in aggregate funding shortfall (PBGC 4010 FS), or with fewer than 500 participants in all defined benefit plans. Note that interest rate stabilization does not apply for purposes of determining the PBGC FTAP or the PBGC 4010 FS.

The 2020 PBGC FTAP is 85.76% In addition, we understand that all other pension plans within the Company's controlled group also have PBGC FTAPs of at least 80%. As a result, no 4010 filing is expected to be required for 2020 as a result of the plans' funded status. However, the only plans we have considered in this analysis are American Electric Power System Retirement Plan; if there are other plans within the controlled group, a filing may be required.

At-Risk status for determining minimum required contributions

The plan is not in at-risk status, as defined in the PPA, for the 2020 plan year, because the plan's FTAP for the 2019 plan year was at least 80%, and/or the plan's FTAP measured using "at-risk assumptions" was at least 70%.

The plan will not be in at-risk status, as defined in the PPA, for the 2021 plan year, because the plan's FTAP for the 2020 plan year is at least 80%, and/or the plan's FTAP measured using "at-risk assumptions" is at least 70%.

When a plan is in at-risk status as defined in the PPA:

The plan is subject to potentially higher minimum contribution requirements. The funding target and target normal cost for purposes of determining the minimum required contribution must be measured reflecting certain mandated assumptions ("at-risk assumptions"). Specifically, participants eligible to retire within the next 11 years must be assumed to retire immediately when first eligible (but not before the end of the current year, except in accordance with the regular valuation assumptions), and all participants must be assumed to elect the most valuable form of payment available when they begin receiving benefits. In addition, plans that have been at-risk in past years may also be required to increase the funding target and target normal cost for prescribed assumed expenses. The net effect of these assumptions and expense adjustments in most cases is to increase required contributions and PBGC variable premiums

The plan sponsor must indicate in the annual funding notice for the plan that the plan is at-risk and disclose additional at-risk funding targets.

Immediate taxation of non-qualified pension or deferred compensation for certain employees may occur if the plan sponsor is a public company. This may result when non-qualified pension or deferred compensation for such employees is funded during a period when a plan sponsored by the plan sponsor or another member of the plan sponsor's controlled group is in at-risk status.

Pension cost and funded position

The cost of the pension plan is determined in accordance with ASC 715. The Fiscal 2020 pension cost for the plan is $103,600,934.

Under ASC 715, the funded position (fair value of plan assets less the projected benefit obligation, or "PBO") of each pension plan at the plan sponsor's fiscal year-end (measurement date) is required to be reported as an asset (for overfunded plans) or a liability (for underfunded plans). The PBO is the actuarial present value of benefits attributed to service rendered prior to the measurement date, taking into consideration expected future pay increases for pay-related plans. The plan's overfunded/(underfunded) PBO as of January 1, 2020 was $(146,298,369), based on the fair value of plan assets of $5,049,268,887 and the PBO of $5,195,567,256.

Fiscal year-end financial reporting information and disclosures are prepared before detailed participant data and full valuation results are available. Therefore, the funded position at December 31, 2019 was derived from a roll forward of the January 1, 2019 valuation results, adjusted for the year-end discount rate, changes in other key assumptions and asset values, as well as significant changes in plan provisions and participant population. The fiscal year-end December 31, 2020 financial reporting information will be developed based on the results of the January 1, 2020 valuation, projected to the end of 2020 and similarly adjusted for the year-end discount rate and asset values, as well as significant changes in plan provisions and participant population.

The actuarial gains/(losses) due to demographic experience, including any assumption changes, and investment return different from assumed during the prior year were $(482,155,2126) and $421,009,099 respectively.

Change in pension cost and funded position

The pension cost increased from $56,971,973 in fiscal 2019 to $103,600,934 in fiscal 2020 and the funded position declined from $(76,029,696) to $(146,298,369), as set forth below:

All monetary amounts shown in US Dollars

	Net Periodic Cost	Funded Status
Prior year	57 0	(76 0)
Change due to		
▸ Expected based on prior valuation	14.4	(14 7)
▸ Unexpected noninvestment experience	2 4	(28 7)
▸ Unexpected investment experience	(10 5)	431 4
▸ Assumption changes (other than those included in Experience Study)	11 5	(444.0)
▸ 2019 Assumption Experience Study	5 7	(14.3)
▸ Change in expected return on asset assumption	23 1	0
▸ Plan amendments	0	0
▸ Settlements, curtailments, certain termination benefits	0	0
▸ Acquisitions	0	0
▸ Method changes	0	0
▸ Changes in estimation techniques	0	0
Current year	103 6	(146 3)

Significant reasons for these changes include the following:

- The discount rate decreased 105 basis points compared to the prior year, which increased the pension cost and caused the funded position to deteriorate.
- The expected long-term rate of return on plan assets decreased from 6 25% to 5 75%, which increased the pension cost.
- The actual return on the fair value of plan assets since the prior measurement date was more than expected, which decreased the pension cost and caused the funded position to increase.
- The lump sum conversion rate decreased from 3.90% to 3.00%, which decreased the pension cost and improved the funded position.
- An experience study of demographic assumptions was conducted in 2019, the results of which increased the pension cost and caused the funded position to deteriorate.
- The mortality used to convert 417(e) based forms of payment was updated, which decreased the pension cost and caused the funded position to deteriorate.
- The healthy and disabled base mortality tables and projection scales were updated as described in Appendix A, which decreased the pension cost and caused the funded position to improve.
- Demographic experience was less favorable than expected, which increased the pension cost and caused the funded position to deteriorate.

Basis for valuation

Appendix A summarizes the assumptions and methods used in the valuation. Appendix B summarizes the principal provisions of the plan being valued. Both of these appendices include a summary of any changes since the prior valuation. Unless otherwise described below under Subsequent Events, assumptions were selected based on information known as of the measurement date

Subsequent events

The results provided in this report reflect data and assumptions appropriate for the purpose of the measurement. Effects of COVID-19 on the financial markets, regulations, and experience are uncertain and still evolving The results in this report make no allowances for the effects of COVID-19. There may be significant effects on plan experience and/or assumptions, both demographic and economic, as well as the possibility of related changes in certain plan provisions, used for future measurements.

Additional information

None.

Actuarial certification

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. However, please note the information discussed below regarding this valuation.

Reliances

In preparing the results presented in this report, we have relied upon information regarding plan provisions, participants, plan assets and sponsor elections provided by AEP and other persons or organizations designated by AEP. See the Sources of Data and Other Information section in Appendix A for further information. In addition, the results in this report are dependent on contributions reported for the prior plan year and maintenance of funding balance elections after the valuation date.

We have reviewed this information for overall reasonableness and consistency, but have neither audited nor independently verified this information. Based on discussions with and concurrence by the plan sponsor, assumptions or estimates may have been made if data were not available. We are not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations.

We have relied on all the information provided as complete and accurate. The results presented in this report are directly dependent upon the accuracy and completeness of the underlying data and information. Any material inaccuracy in the data, assets, plan provisions or information regarding contributions or funding balance elections provided to us may have produced results that are not suitable for the purposes of this report and such inaccuracies, as corrected by AEP, may produce materially different results that could require that a revised report be issued.

Assumptions and methods under ERISA and the Internal Revenue Code for funding purposes

The plan sponsor selected, as prescribed by regulation, key assumptions and funding methods (including the mortality assumption, asset valuation method and the choice among prescribed interest rates) employed in the development of the contribution amounts and communicated them to us in the letter dated September 25, 2020.

To the extent not prescribed by ERISA, the Internal Revenue Code and regulatory guidance from the Treasury and the IRS, or selected by the sponsor, the actuarial assumptions and methods employed in the development of the contribution amounts have been selected by Willis Towers Watson, with the concurrence of the plan sponsor. It is beyond the scope of this actuarial valuation to analyze the reasonableness and appropriateness of prescribed methods and assumptions, or to analyze other sponsor elections from among the alternatives available for prescribed methods and assumptions.

Other than prescribed assumptions, ERISA and the Internal Revenue Code require the use of assumptions each of which is "reasonable (taking into account the experience of the plan and reasonable expectations), and which, in combination, offer the actuary's best estimate of anticipated experience under the plan " The results shown in this report have been developed based on actuarial assumptions that, to the extent evaluated or selected by Willis Towers Watson, we consider to be reasonable. Other actuarial assumptions could also be considered to be reasonable. Thus, reasonable results differing from those presented in this report could have been developed by selecting different reasonable assumptions.

A summary of the assumptions, methods and sources of data and other information used is provided in Appendix A. Note that any subsequent changes in methods or assumptions for the 2020 plan year will change the results shown in this report and could result in plan qualification issues under IRC §436 if the application of benefit restrictions is affected by the change.

Assumptions and methods under U.S. GAAP

As required by U.S. GAAP, the actuarial assumptions and methods employed in the development of the pension cost have been selected by the plan sponsor. Willis Towers Watson has concurred with these assumptions and methods, except for the expected rate of return on plan assets selected as of January 1, 2020. Evaluation of the expected return assumption was outside the scope of Willis Towers Watson's assignment and would have required substantial additional work that we were not engaged to perform. U.S. GAAP requires that each significant assumption "individually represent the best estimate of a particular future event."

The results shown in this report have been developed based on actuarial assumptions that, to the extent evaluated by Willis Towers Watson, we consider to be reasonable. Other actuarial assumptions could also be considered to be reasonable Thus, reasonable results differing from those presented in this report could have been developed by selecting different reasonable assumptions.

A summary of the assumptions, methods and sources of data and other information used is provided in Appendix A. Note that any subsequent changes in methods or assumptions for the January 1, 2020 measurement date will change the results shown in this report.

Accumulated other comprehensive (income)/loss amounts shown in the report are shown prior to adjustment for tax effects. Any tax effects in AOCI should be determined by American Electric Power Co in consultation with its tax advisors and independent accountants.

Nature of actuarial calculations

The results shown in this report are estimates based on data that may be imperfect and on assumptions about future events that cannot be predicted with any certainty. The effects of certain plan provisions may be approximated, or determined to be insignificant and therefore not valued. Reasonable efforts were made in preparing this valuation to confirm that items that are significant in the context of the actuarial liabilities or costs are treated appropriately, and are not excluded or included inappropriately. Any rounding (or lack thereof) used for displaying numbers in this report is not intended to imply a degree of precision, which is not a characteristic of actuarial calculations.

If overall future plan experience produces higher benefit payments or lower investment returns than assumed, the relative level of plan costs or contribution requirements reported in this valuation will likely increase in future valuations (and vice versa). Future actuarial measurements may differ significantly from the current measurements presented in this report due to many factors, including: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for the measurements (such as the end of an amortization period) or additional contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. It is beyond the scope of this valuation to analyze the potential range of future pension contributions, but we can do so upon request See Appendix C for disclosures required under ASOP No. 51 of significant risks related to the plan.

See Basis for Valuation in Section 1 above for a discussion of any material events that have occurred after the valuation date that are not reflected in this valuation.

Limitations on use

This report is provided subject to the terms set out herein and in our Master Consulting Services Agreement dated July 29, 2004 and any accompanying or referenced terms and conditions

The information contained in this report was prepared for the internal use of American Electric Power Co. and its auditors and any organization that provides benefit administration services for the plan, in connection with our actuarial valuation of the pension plan as described in Purposes of Valuation above. It is not intended for and may not be used for other purposes, and we accept no responsibility or liability in this regard. American Electric Power Co. may distribute this actuarial valuation report to the appropriate authorities who have the legal right to require American Electric Power Co. to provide them this report, in which case American Electric Power Co. will use best efforts to notify Willis Towers Watson in advance of this distribution. Further distribution to, or use by, other parties of all or part of this report is expressly prohibited without Willis Towers Watson's prior written consent. Willis Towers Watson accepts no responsibility for any consequences arising from any other party relying on this report or any advice relating to its contents.

Professional qualifications

The undersigned consulting actuaries are members of the Society of Actuaries and meet the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" relating to pension plans. Our objectivity is not impaired by any relationship between American Electric Power Co. and our employer, Willis Towers Watson US LLC.

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Director, Retirement – Valuation Actuary
20-06491
September 28, 2020

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Lead Associate, Retirement – Valuation Actuary
EA Number: 20-08791
September 28, 2020

Willis Towers Watson US LLC

September 2020

Section 2: Actuarial exhibits

2.1 Summary of liabilities for minimum funding purposes

All monetary amounts shown in US Dollars

Plan Year Beginning	01/01/2020	01/01/2019
A Funding Target (Disregarding At-risk Assumptions)		
1 Funding target	4,277,258,567	4,247,381,107
2 Target normal cost[1]	101,389,545	94,230,563
B Funding Target (At-risk Assumptions)		
1 Funding target	N/A	N/A
2 Target normal cost	N/A	N/A
C Funding Target		
1 Number of consecutive years at-risk	0	0
2 Funding target		
a Active employees – non-vested benefits [2]	13,828,882	26,023,193
b Active employees – vested benefits [2]	1,685,392,207	1,670,099,436
c Participants with deferred benefits	245,000,985	221,963,761
d Participants receiving benefits	2,333,036,493	2,329,294,717
e Total funding target	4,277,258,567	4,247,381,107
3 Target normal cost	101,389,545	94,230,563

[1] Includes administrative expenses
[2] See section 2 8 for definition of vested benefits

2.2 Change in plan assets during plan year

All monetary amounts shown in US Dollars

Plan Year Beginning			January 1, 2019
A	**Reconciliation of Market Value of Plan Assets**		
	1	Market value of plan assets at January 1, 2019 (including discounted contributions receivable)	4,701,727,981
	2	Discounted contributions receivable at January 1, 2019	0
	3	Market value of plan assets at January 1, 2019 (excluding contributions receivable)	4,701,727,981
	4	Employer contributions	
		a For prior plan year	0
		b For current plan year	0
		c IRC §436 contributions for current plan year	0
		d Total	0
	5	Employee contributions	0
	6	Benefit payments	(361,629,289)
	7	Administrative expenses paid by plan	(8,026,177)
	8	Transfers from/(to) other plans	0
	9	Investment return	
		a Interest and dividends	0
		b Investment expenses	0
		c Realized gains/(losses)	0
		d Change in unrealized appreciation	717,196,372
		e Total	717,196,372
	10	Market value of plan assets at January 1, 2020 (excluding contributions receivable)	5,049,268,887
	11	Discounted contributions receivable at January 1, 2020	107,316,074
	12	Market value of plan assets at January 1, 2020 (including discounted contributions receivable)	5,156,584,961
B	**Rate of Return on Invested Plan Assets (i.e., for crediting unused funding balances)**		
	1	Weighted invested plan assets	4,516,900,247
	2	Rate of return	15.88%

C Discounted Receivable Contributions at January 1, 2020

Date	Prior Year Contributions	Discounted Value at January 1, 2020
September 24, 2020	111,538,000	107,316,074
Total		107,316,074

2.3 Development of actuarial value of plan assets

All monetary amounts shown in US Dollars

Plan Year Beginning	January 1, 2020

Development of AVA

Month	Expenses	Benefit Payments	Contributions	Fair Value at Beginning of Month
July 2019	184,400	38,038,386	0	4,971,558,120
August 2019	239,407	30,387,607	0	4,951,132,887
September 2019	784	31,404,872	0	5,045,385,659
October 2019	3,091,730	30,260,589	0	4,985,611,472
November 2019	756,883	24,933,918	0	4,991,430,164
December 2019	431,906	23,912,626	0	5,012,796,873

AVA with receivables

A	**Preliminary Actuarial Value of Assets before Corridor as of January 1, 2020**		
	1 Monthly asset values adjusted for expenses and benefit payments rolled forward to January 1, 2020		
		Month	**Asset value**
	a	July 2019	4,935,428,905
	b	August 2019	4,928,784,703
	c	September 2019	5,029,286,295
	d	October 2019	4,976,076,461
	e	November 2019	4,990,711,959
	f	December 2019	5,013,167,170
	g	January 2020	5,049,268,887
	h	Average of monthly asset values	4,988,960,625
	2	Discounted contributions receivable at January 1, 2020	107,316,074
	3	Preliminary Actuarial Value of Assets and before application of corridor	5,096,276,699
B	Lower Bound of Corridor (90% of A12 from prior page)		4,640,926,465
C	Upper Bound of Corridor (110% of A12 from prior page)		5,672,243,457
D	**Actuarial Value of Assets as of January 1, 2020 (A3 but not smaller than B nor larger than C)**		5,096,276,699

2.4 Calculation of minimum required contribution

All monetary amounts shown in US Dollars

Reconciliation of Funding Balances as of January 1, 2020	Funding Standard Carryover Balance	Prefunding Balance	Total
A Determination of Funding Balances			
1 Funding balance as of January 1, 2019	168,455,209	721,752,382	890,207,591
2 Amount used to offset prior year minimum required contribution[1]	0	0	0
3 Adjustment for investment experience	26,750,687	114,614,278	141,364,965
4 Amount of additional prefunding balance created by election	N/A	7,968,792	7,968,792
5 Amount of funding balance reduction for current year by election or deemed election	0	0	0
6 Funding balance as of January 1, 2020	195,205,896	844,335,452	1,039,541,348

Plan Year Beginning	January 1, 2020
B Calculation of Minimum Required Contribution	
1 Target normal cost	101,389,545
2 Funding surplus	0
3 Net shortfall amortization installment (see section 2 5)	0
4 Waiver amortization installment	0
5 Minimum required contribution	101,389,545
6 Funding balance available	1,039,541,348
7 Remaining cash requirement (assuming sponsor elects full use of the available funding balances)	0

The minimum required contribution is determined as of the plan's valuation date. Any payment made on a date other than the valuation date must be adjusted for interest using the plan's effective interest rate of 5.25%.

Additional details regarding the calculation of the minimum required contribution may be obtained from the Form 5500 Schedule SB forms and attachments.

[1] Net of revoked excess application of funding balance, if any

2.5 Schedule of minimum funding amortization bases

All monetary amounts shown in US Dollars

Type of Base	Date Established	Remaining Amortization Period (Years)	Outstanding Balance	Amortization Payment
Total			0	0

2.6 Calculation of estimated maximum deductible contribution

All monetary amounts shown in US Dollars

Based on Plan Year		2020
A	**Basic Maximum**	
	1 Funding target	4,729,986,087
	2 Target normal cost	110,604,319
	3 Actuarial value of plan assets	5,096,276,699
	4 50% of funding target	2,364,993,044
	5 Additional funding target for future compensation or benefit increases	0
	6 Basic maximum deductible contribution	2,109,306,751
B	**At-risk Maximum**[1]	
	1 Funding target (at-risk assumptions)	N/A
	2 Target normal cost (at-risk assumptions)	N/A
	3 Actuarial value of plan assets	N/A
	4 At-risk maximum deductible contribution	N/A
C	**Minimum Required Contribution**	101,389,545
D	**Estimated Maximum Deductible Contribution**	2,109,306,751

The estimated maximum deductible contribution applies to the tax year in which the plan year ends, and is based on our understanding of IRC §404(a)(1). No regulatory guidance has been provided by the IRS/Treasury. Allocations of costs to inventory have not been considered, and amounts deductible for state income tax purposes may differ. Deductibility can be influenced by timing of contributions, differences between fiscal year and plan year, and differences (if any) between the years to which prior contributions were assigned for minimum funding purposes and the years in which they were deducted. Our results have not been adjusted for non-deducted contributions included in the valuation assets, nor is it clear that such adjustment is appropriate post-PPA. We recommend the plan sponsor review with tax counsel the tax-deductibility of all contributions as Willis Towers Watson does not provide legal or tax advice.

The funding target and target normal cost for maximum purposes are determined using the October, 2019 3-segment rates and do not reflect the interest rate corridors of MAP-21, as updated for the extension of corridors under HATFA and the Bipartisan Budget Act of 2015.

In addition, the actuarial value of plan assets shown is the same as used for determining the minimum required contribution. Thus contributions receivable (if any) are discounted at stabilized rates, and the limit on the expected return on assets reflected in asset smoothing (if applicable) is the 3rd segment

1 At-risk maximum applies only for plans not in at-risk status for purposes of determining maximum deductible contributions for the plan year

rate, reflecting stabilized rates as expressly allowed by IRS Notice 2012-61 when the stabilized 3rd segment rate is higher than the rate ignoring the corridors.

This limit has been determined without regard to the special rule of IRC §404(o)(2)(B) providing a potentially higher maximum deduction based on at-risk assumptions, which is available for plans that are not at risk

2.7 Calculation of PBGC variable rate premium

All monetary amounts shown in US Dollars

Premium Payment Year	2020
A Assumptions and Methods Used to Determine Premium Funding Target	
1 Premium funding target method	Standard
2 Premium funding target method election date	January 1, 2014
3 UVB valuation date	January 1, 2020
4 Discount rates	
a First segment rate [10-year rate]	2 03%
b Second segment rate [20-year rate]	3.06%
c Third segment rate [30-year rate]	3.59%
B Premium Funding Target	
1 Attributable to active participants	1,988,060,570
2 Attributable to terminated vested participants	293,797,147
3 Attributable to retirees and beneficiaries receiving payment	2,777,659,815
4 Total premium funding target[1]	5,059,517,532
C Market Value of Plan Assets	5,156,584,961
D Unfunded Vested Benefits	0
E Uncapped Variable Rate Premium[2]	0
F Maximum VRP[3]	19,601,901
G Variable Rate Premium	0

[1] Reflects at-risk status, if applicable.
[2] Using variable rate premium of $45 per $1,000 of unfunded vested benefits
[3] Using maximum per-participant premium of $561

2.8 ASC 960 (plan accounting) information

All monetary amounts shown in US Dollars

Plan Year Beginning	January 1, 2020
A Present Value of Accumulated Benefits	
1 Vested accumulated benefits	
a Active employees	1,538,238,687
b Participants with deferred benefits	236,103,837
c Participants receiving benefits	2,188,297,460
d Total vested accumulated benefits	3,962,639,984
2 Non-vested accumulated benefits	11,879,773
3 Total accumulated benefits	3,974,519,757
4 Market value of plan assets[1]	5,160,806,887
B Reconciliation of Present Value of Accumulated Benefits	
1 Present value of accumulated benefits as of December 31, 2018	3,847,849,173
2 Changes during the year due to.	
a Benefits accumulated	70,206,651
b Actuarial (gains)/losses	20,236,035
c Decrease in the discount period	233,748,839
d Actual benefits paid	(361,629,289)
e Assumption changes	164,108,348
f Plan amendments	0
g Net increase/(decrease)	126,670,584
3 Present value of accumulated benefits as of December 31, 2019	3,974,519,757

Actuarial Assumptions and Methods

The assumptions used to develop the present value of accumulated benefits, including any changes from the prior year, are described in Appendix A, except a discount rate of 5.75% was used. For the prior valuation, a discount rate of 6.25% was used.

The discount rate used is the same as the expected rate of return on plan assets for the plan year under ASC 715-30-35 and, as required by that standard and further discussed in the Actuarial Certification of this report, was selected by the plan sponsor without using the work of Willis Towers Watson. Evaluation of this assumption was outside the scope of Willis Towers Watson's assignment and would have required substantial additional work that we were not engaged to perform We understand that the expected return on assets assumption reflects the plan sponsor's estimate of future experience for trust asset returns, reflecting the plan's current asset allocation and any

[1] Assets include accrued contributions for the 2019 plan year of $111,538,000 not yet deposited at January 1, 2020

expected changes during the current plan year, current market conditions and the plan sponsor's expectations for future market conditions.

Plan Provisions

Plan provisions reflected in these calculations, including any changes during the prior year, are described in Appendix B.

Accumulated and Vested Benefits

Accumulated benefits include benefits earned under the plan's benefit formula based on service rendered and compensation earned before the measurement date.

Benefits included in vested benefits are the same as described above for accrued benefits, except the following benefits are excluded:

- For participants who are not disabled on the measurement date, disability benefits in excess of the value of standard termination benefits (retirement benefits for those eligible).
- For participants who have not yet satisfied the eligibility requirements for these benefits, early retirement benefits and supplements in excess of standard termination benefits.
- Death benefits in excess of the plan's QPSA.
- All benefits for participants who are not yet vested in their accrued benefits or eligible for other benefits.

2.9 Pension obligations and funded position under U.S. GAAP (ASC 715)

All monetary amounts shown in US Dollars

Measurement Date			01/01/2020	01/01/2019
A	**Obligations**			
	1	Accumulated Benefit Obligation (ABO)		
		a. Active participants	1,979,383,873	1,838,423,350
		b Participants with deferred benefits	292,428,789	246,044,345
		c Participants receiving benefits	2,687,297,100	2,513,467,409
		d. Total	4,959,109,762	4,597,935,104
	2	Future salary increases	236,457,494	179,822,573
	3	Projected benefit obligation (PBO)	5,195,567,256	4,777,757,677
B	**Plan Assets**			
	1	Fair value [FV], excluding receivable contributions	5,049,268,887	4,701,727,981
	2	Investment losses/(gains) not yet in market-related value	(233,347,889)	170,705,185
	3	Market-related value	4,815,920,998	4,872,433,166
C	**Funded Position**			
	1	Overfunded/(underfunded) PBO	(146,298,369)	(76,029,696)
	2	PBO funded percentage	97 2%	98 4%
D	**Amounts in Accumulated Other Comprehensive Income**			
	1	Prior service cost/(credit)	0	0
	2	Net actuarial loss/(gain)	1,369,587,307	1,356,290,606
	3	Total	1,369,587,307	1,356,290,606
E	**Key Assumptions**			
	1	Discount rate	3 25%	4.30%
	2	Rate of compensation increase	Rates vary by age from 3 0% to 11 5%	Rates vary by age from 3.5% to 12 0%
F	**Census Date**		01/01/2020	01/01/2019

The results above may differ from the amounts reported in AEP's December 31, 2019 financial statements because year-end financial reporting is prepared before the corresponding valuation results are available.

2.10 Changes in plan benefit obligations and assets

All monetary amounts shown in US Dollars

Period Beginning		01/01/2020	01/01/2019
A	**Change in Projected Benefit Obligation (PBO)**		
	1 PBO at beginning of prior fiscal year	4,777,757,677	5,158,705,604
	2 Employer service cost	95,529,411	97,644,207
	3 Interest cost	201,754,331	185,314,989
	4 Actuarial loss/(gain)	482,155,126	(290,501,490)
	5 Plan participants' contributions	0	0
	6 Benefits paid from plan assets	(361,629,289)	(373,405,633)
	7 Administrative expenses paid, if accrued through service cost	0	0
	8 Plan change	0	0
	9 Acquisitions/divestitures	0	0
	10 Curtailments	0	0
	11 Settlements	0	0
	12 Special/contractual termination benefits	0	0
	13 PBO at beginning of current fiscal year	5,195,567,256	4,777,757,677
B	**Change in Plan Assets**		
	1 Fair value of plan assets at beginning of prior fiscal year	4,701,727,981	5,183,145,851
	2 Actual return on plan assets	717,196,372	(101,918,710)
	3 Employer contributions	0	0
	4 Plan participants' contributions	0	0
	5 Benefits paid	(361,629,289)	(373,405,633)
	6 Administrative expenses paid	(8,026,177)	(6,093,527)
	7 Acquisitions/divestitures	0	0
	8 Settlements	0	0
	9 Fair value of plan assets at beginning of current fiscal year	5,049,268,887	4,701,727,981

2.11 Pension cost under U.S. GAAP (ASC 715)

All monetary amounts shown in US Dollars

Fiscal Year Ending		12/31/2020	12/31/2019
A	**Pension Cost**		
	1 Service cost	111,537,019	95,529,411
	2 Interest cost	165,749,258	201,754,331
	3 Expected return on plan assets	(265,077,449)	(296,187,273)
	4 Net prior service cost/(credit) amortization	0	0
	5 Net loss/(gain) amortization/recognition	91,392,106	55,875,504
	6 Net periodic pension cost/(income)	103,600,934	56,971,973
	7 Curtailments	0	0
	8 Settlements	0	0
	9 Special/contractual termination benefits	0	0
	10 Total pension cost	103,600,934	56,971,973
B	**Key Assumptions** (See Appendix A for interim measurements, if any)		
	1 Discount rate	3 25%	4 30%
	2 Expected long-term rate of return on plan assets	5 75%	6.25%
	3 Rate of compensation increase	Rates vary by age from 3 0% to 11 5%	Rates vary by age from 3.5% to 12 0%
C	**Census Date**	01/01/2020	01/01/2019

2.12 Development of market-related value of plan assets under U.S. GAAP (ASC 715)

All monetary amounts shown in US Dollars

Fiscal Year Ending			12/31/2020
Market-Related Value of Plan Assets as of January 1, 2020			
1 Fair value of plan assets as of January 1, 2020			5,049,268,887
2 Deferred investment (gains)/losses for prior periods			
Fiscal Year	**(Gain)/Loss**	**Percent Deferred**	**Deferred Amount**
a 2020	(426,441,846)	80%	(341,153,477)
b 2019	407,961,992	60%	244,777,195
c 2018	(320,802,104)	40%	(128,320,842)
d 2017	(43,253,828)	20%	(8,650,766)
e Total			(233,347,889)
3 Market-Related Value of Plan Assets			4,815,920,998

2.13 Summary of net prior service cost/(credit) balances

All monetary amounts shown in US Dollars

Measurement Date Established	Original Amount	Net Amount at prior financial year end	Remaining Amortization Period	Amortization Amount	Effect of Curtailments	Other Events
Total		0		0	0	0

Summary of Net Loss/(Gain)[1]

	Net Amount at 01/01/2020	Amortization Amount in 2020	Effect of Curtailments	Effect of Settlements	Other Events
	1,369,587,307	91,392,106	0	0	0

1 See Appendix A for description of amortization method

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Section 3: Participant data

3.1 Summary of participant data

All monetary amounts shown in US Dollars

Census Date	01/01/2020	01/01/2019
A Active Employees		
1 Number	16,655	16,673
2 Expected plan compensation for year beginning on the valuation date (limited by IRC §401(a)(17))	1,821,936,280	1,775,657,486
3 Average plan compensation	109,393	106,499
4 Average age	47.1	47.5
5 Average credited service	16 77	17 33
6 Average future working life (years)	11 854	12 498
B Participants with Deferred Benefits		
1 Number (non-cash balance)	1,197	1,295
2 Total annual pension (non-cash balance)	6,281,111	6,912,113
3 Average annual pension (non-cash balance)	5,247	5,338
4 Number of cash balance	2,378	2,240
5 Total cash balance	197,536,495	172,223,945
6 Average cash balance	83,068	76,886
7 Average age	54 1	52 9
8 Distribution at January 1, 2020		

Non-Cash Balance	Age	Number	Annual Pension
	Under 40	1	423
	40-44	0	0
	45-49	8	30,396
	50-54	124	512,066
	55-59	385	2,060,112
	60-64	537	3,096,820
	65 and over	142	581,295
	Total	1,197	6,281,111

Cash Balance	Age	Number	Account Balance
	Under 40	514	10,306,667
	40-44	264	7,938,549
	45-49	246	11,288,792
	50-54	307	18,681,117
	55-59	435	45,658,367
	60-64	425	66,017,776
	65 and over	187	37,645,227
	Total	2,378	197,536,495

C	**Participants Receiving Benefits**		
	1 Number	15,017	15,206
	2 Total annual pension	227,644,864	228,688,396
	3 Average annual pension	15,159	15,039
	4 Average age	75 7	75 5
	5 Distribution at January 1, 2020		

Age	Number	Annual Pension
Under 55	44	254,027
55-59	280	3,438,196
60-64	1,331	23,777,652
65-69	2,675	43,880,372
70-74	3,375	55,852,669
75-79	2,465	31,346,619
80-84	2,156	30,462,410
85 and over	2,691	38,632,919
Total	15,017	227,644,864

3.2 Participant reconciliation

	Active	Deferred Inactive	Currently Receiving Benefits	Total
1 Included in January 1, 2019 valuation	16,673	3,535	15,206	35,414
2 Change due to:				
a New hire and rehire[1]	1,356	(18)	0	1,338
b Non-vested termination	(121)	0	0	(121)
c Vested termination	(378)	(378)	0	0
d Retirement	(241)	(128)	369	0
e Disability	(6)	(4)	10	0
f Death without beneficiary	(36)	(10)	(543)	(589)
g Death with beneficiary	(1)	0	(202)	(203)
h New beneficiary	0	0	215	215
i Cashout	(584)	(181)	(32)	(797)
j Miscellaneous[2]	(7)	3	(6)	(10)
k Net change	(18)	40	(189)	(167)
3 Included in January 1, 2020 valuation[3,4]	16,655	3,575	15,017	35,247

[1] Includes 151 active participants at the AEP Energy Partners location who became eligible for benefits effective January 1, 2020 based on the file provided by AEP on March 6, 2020

[2] Includes adjustments for prior omissions and data corrections

[3] The deferred inactive count includes 46 CSW participants that are still active at AEP and assumed to be owed a benefit

[4] The currently receiving benefits count includes 259 alternate payees with QDROs as of January 1, 2020.

3.3 Age and service distribution of participating employees

Number distributed by attained age and attained years of credited service

	Years Of Credited Service														
Attained Age	Under 1			1 to 4			5 to 9			10 to 14			15 to 19		
		Average			Average			Average			Average			Average	
	No	Comp	Cash Bal	No	Comp	Cash Bal	No	Comp	Cash Bal	No	Comp	Cash Bal	No	Comp	Cash Bal
Under 25	6			321	71,109	4,110	7								
25 to 29	26	47,014		969	76,213	6,333	269	90,525	16,419	9					
30 to 34	32	67,521		855	82,851	7,862	551	95,853	21,339	319	105,966	40,316	8		
35 to 39	26	77,436		655	87,108	9,280	424	97,467	25,009	678	108,547	49,833	202	112,900	68,031
40 to 44	13			412	89,191	11,091	304	95,408	28,276	607	107,009	57,352	398	119,889	84,643
45 to 49	19			316	94,096	13,755	243	99,423	33,416	465	108,815	66,806	362	118,076	98,285
50 to 54	8			239	97,597	14,286	155	105,942	36,203	371	108,808	75,858	258	126,861	120,817
55 to 59	6			203	91,780	16,008	114	100,989	40,820	259	106,274	83,680	215	118,861	126,522
60 to 64	8			85	101,361	21,831	66	101,502	46,677	146	110,400	98,494	131	118,447	141,844
65 to 69	1			18			24	88,369	46,476	39	89,435	85,861	32	123,924	176,450
70 & Over				2			7			9			10		

Attained Age	Years Of Credited Service														
	20 to 24			25 to 29			30 to 34			35 to 39			40 & up		
		Average			Average			Average			Average			Average	
	No	Comp	Cash Bal	No	Comp.	Cash Bal.	No	Comp.	Cash Bal	No	Comp	Cash Bal.	No.	Comp.	Cash Bal.
Under 25															
25 to 29															
30 to 34															
35 to 39	6														
40 to 44	132	117,659	98,193	5											
45 to 49	286	121,867	119,084	111	120,895	142,328	4								
50 to 54	261	125,638	136,252	410	129,516	166,457	312	124,113	175,202	17					
55 to 59	255	118,964	148,483	320	109,872	163,006	751	125,871	189,902	674	123,220	199,329	100	114,128	207,758
60 to 64	113	111,203	157,017	187	112,786	179,695	330	112,740	190,836	592	126,055	222,289	513	116,529	214,863
65 to 69	21	110,270	152,893	36	104,220	182,584	42	111,405	181,003	82	123,150	220,638	154	124,291	220,404
70 & Over	4			4			7			8			16		

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Section 4: Adjusted Funding Target Attainment Percentage (AFTAP)

American Electric Power Co. ("AEP") retained Willis Towers Watson US LLC ("Willis Towers Watson") to perform a valuation of its pension plan for the purpose of measuring the plan's AFTAP for the plan year beginning January 1, 2020 in accordance with ERISA and the Internal Revenue Code. This valuation has been conducted in accordance with generally accepted actuarial principles and practices.

The enrolled actuaries making this certification are members of the Society of Actuaries and other professional actuarial organizations and meet their "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States."

We hereby certify that the plan's AFTAP for the plan year beginning January 1, 2020 is 119.14% This percentage is based on the assumptions, participant data, and plan provisions we relied upon to prepare the results shown in this report, reflects the valuation limitations discussed in this report and is also based on the following additional information:

Annuity Purchases

- AEP's representation is that there were no annuity purchases made for non-highly compensated employees by the plan in the plan years beginning in 2018 and 2019.

Funding Balances

- Our understanding is that American Electric Power Co. has not elected to reduce the plan's funding balance as of the first day of the 2020 plan year.
- Our understanding is that the plan is not subject to a deemed election to reduce the funding balances in 2020
- Our understanding is that American Electric Power Co has not elected to apply any of the plan's funding balances to the 2020 minimum required contribution.
- Our understanding is that American Electric Power Co. has elected to increase the prefunding balance as of the first day of the 2020 plan year as follows:

Date	Amount
January 1, 2020	$7,968,792
Total	$7,968,792

Contributions

- Our understanding is that American Electric Power Co. has made the following employer contributions after December 31, 2019 and before September 28, 2020, for the 2019 plan year, as follows:

Date	Amount
September 24, 2020	111,538,000
Total	$111,538,000

Subsequent Events

There were no plan amendments that took effect in the current plan year that were taken into account for the current plan year's AFTAP certification.

There were no unpredictable contingent event benefits (UCEBs) that took effect in the current plan year that were taken into account for the current plan year's AFTAP certification.

There were no previously suspended accruals restored during the current plan year that were taken into account for the current plan year's AFTAP certification.

Elections

Our understanding of sponsor elections required under the Pension Protection Act of 2006 (PPA) , with respect to interest rates, Actuarial Value of Plan Assets and other methods and/or assumptions, as confirmed in the Sponsor's letter dated September 25, 2020.

In making this certification, we relied on asset, contribution, funding balance election, and annuity purchase information provided by the Company, including dates and amounts of contributions made to the plan through the date of this certification, dates and amounts of funding balance elections by the Company through the date of this certification, and amounts of annuity purchases in the past two years, as shown above. We have reviewed this information for overall reasonableness and consistency but, consistent with the scope of our engagement, have neither audited nor independently verified this information. We do not certify to the accuracy or completeness of asset, contribution, funding balance election and annuity purchase information, and this certification relies on and is contingent on the accuracy and completeness of this information.

The development of the AFTAP is shown below:

All monetary amounts shown in US Dollars

Plan Year Beginning	01/01/2020
Actuarial value of plan assets as of January 1, 2020[1]	5,096,276,699
Funding standard carryover balance at January 1, 2020[2]	195,205,896
Prefunding balance at January 1, 2020[15]	844,335,452
Funding target (disregarding at-risk assumptions)	4,277,258,567
AVA/funding target (disregarding at-risk assumptions)	119.14%
Plan assets for AFTAP calculation[3]	5,096,276,699
Annuity purchases for NHCEs during 2018 and 2019	0
Reflection of Post-Valuation Date Events not Previously Reflected	
Increase in funding target (disregarding at-risk assumptions) for 2020 amendments/UCEBs/restored accruals[4]	N/A
IRC §436 contributions made to enable plan amendments/UCEBs/restored accruals to take effect[5]	N/A
Adjusted funding target, disregarding at-risk assumptions (includes NHCE annuity purchases for the prior two years and post-valuation date amendments)	N/A
Adjusted plan assets (includes NHCE annuity purchases for the prior two years and post-valuation date IRC §436 contributions)	N/A
Specific AFTAP	
Adjusted Funding Target Attainment Percentage (AFTAP)	**119.14%**

1 Reflects discounted contributions made for the 2019 plan year only if paid on or before the certification date Includes security posted by the beginning of the plan year in the form of a bond or cash held in escrow
2 Reflects elections made to-date (other than elections to apply the funding balances to 2020 MRC)
3 AVA if AVA/Funding Target (disregarding at-risk assumptions) >=100%, otherwise (AVA-funding balances)
4 If amendments/UCEBs/restored accruals (i) took effect before this specific certification, (ii) were not reflected in the funding valuation and (iii) require AFTAP recertification, or if AFTAP recertification is not required but the plan sponsor decides to reflect the amendment/UCEBs/restored accruals in the specific AFTAP certification
5 Discounted to January 1, 2020 using the 2020 plan year effective interest rate

Immediate Implications of AFTAP Certification

We believe that the certified AFTAP of 119.14% for the 2020 plan year has the following implications for benefit limitations described in IRC §436. American Electric Power Co. should review these conclusions with ERISA counsel:

Benefit accruals called for under the plan without regard to IRC §436 must continue.

Accelerated distributions called for under the plan without regard to IRC §436 must continue in full.

Amendments that increase benefits must be evaluated at the time they would take effect to determine if they are permissible.

Plant shutdown and other UCEBs must be evaluated at the time they would take effect to determine if they are permissible.

Implications of 2020 AFTAP for Presumptions in Next Plan Year

Because the AFTAP for the 2020 plan year is at least 90%, the presumed AFTAP for 2021 will remain equal to the 2020 certified AFTAP, and changes in benefit restrictions will not occur, before the 2021 AFTAP is certified, provided that the 2021 AFTAP is certified before the first day of the tenth month of the plan year

Note, however, that adoption of plan amendments and/or payment of UCEBs may change this result.

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Director, Retirement – Valuation Actuary
20-06491
September 28, 2020

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Director, Retirement – Valuation Actuary
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September 28, 2020

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20-08791
September 28, 2020

Willis Towers Watson US LLC

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Appendix A: Statement of actuarial assumptions, methods and data sources

1. Assumptions and methods for contribution purposes

Economic Assumptions

Interest rate basis:

■ Applicable month (published)	October 2019
■ Yield curve basis	Segment rates

Funding interest rates:	Reflecting Corridors	Not Reflecting Corridors
■ First segment rate	3.64%	2.79%
■ Second segment rate	5.21%	3.90%
■ Third segment rate	5.94%	4.35%
■ Effective interest rate	5.25%	3.94%

Annual rates of increase

- Compensation:
  - Representative rates

Age	*Rate*
< 25	11.50%
25 – 29	8.50%
30 – 34	7.00%
35 – 39	6.00%
40 – 44	5.00%
45 – 49	4.50%
50 – 54	4.00%
55 – 59	3.75%
60 – 64	3 50%
65 – 69	3.25%
> 70	3.00%

  - Weighted average 5.00%

■ Cash balance crediting rate	4.00%
■ Lump sum/annuity conversion rate	October 2019 segment rates
■ Future Social Security wage bases	3.50%
■ Statutory limits on compensation	N/A
■ Expected rate of return on assets for prior year	5.75%, but not greater than the third segment rate

Demographic Assumptions

Inclusion Date — The valuation date coincident with or next following the date on which the employee becomes a participant.

New or rehired employees — It was assumed there will be no new or rehired employees.

Mortality

- Healthy

Separate rates for non-annuitants (based on RP-2014 “Employees” table without collar or amount adjustments, adjusted backward to 2006 with MP-2014, and then projected forward with a static projection as specified in the regulations under §1.430(h)(3)-1 using Scale MP-2018) and annuitants (based on RP-2000 “Healthy Annuitants” table without collar or amount adjustments, adjusted backward to 2006 with MP-2014, and then projected forward with a static projection as specified in the regulations under §1.430(h)(3)-1 using Scale MP-2018).

For ASC 960: The Pri-2012 Private Retirement Plans mortality tables with sex-distinct rates for employees, retirees, and contingent survivors, with no collar or amount adjustment, and a fully generational mortality improvement projection using a modified version of Scale MP-2019 projecting from the base year of 2012. The modified projection scale reflects long-term rates of mortality improvement equal to 75% of the corresponding rates of Scale MP-2019

- Disabled

Alternative disabled life mortality tables as defined under Revenue Ruling 96-7

For ASC 960: The Pri-2012 Private Retirement Plans disabled mortality tables with separate rates for males and females and a fully generational mortality improvement projection using a modified version of Scale MP-2019 projecting from the base year of 2012. The modified projection scale reflects long-term rates of mortality improvement equal to 75% of the corresponding rates of Scale MP-2019.

- Lump sum/annuity conversion — Applicable 417(e) IRS Mortality Table

Termination — Rates varying by service:

Percentage leaving during the year	
Service	Rate
<3	7.00%
3 – 4	6 00%
5 – 9	5 00%
10 – 14	4 00%
15 – 19	2 50%
20 +	1 50%

Disability

Rates apply to employees not eligible to retire and vary by age and sex as indicated by the following sample values:

Percentage becoming disabled during the year		
Age	Male	Female
20	0.060%	0 090%
30	0.060%	0 090%
40	0 074%	0.110%
50	0 178%	0.267%
60	0 690%	1 035%

Retirement

Rates varying by age; average retirement age 63.

Percentage retiring during the year	
Age	Rate
55 – 58	4.00%
59	6.00%
60	7.50%
61	9.00%
62 – 64	16.00%
65 – 67	25.00%
68 – 69	20 00%
70 +	100 00%

Benefit commencement date:

- Preretirement death benefit — The later of the death of the active participant or the date the participant would have attained age 55.
- Deferred vested benefit (active participants) — The later of age 55 or termination of employment
- Deferred vested benefit (current deferred vested) — The later of age 65 or current age
- Disability benefit — Upon disablement
- Retirement benefit — Upon termination of employment

Form of payment

50% lump sum; 50% annuity for retirement eligible East grandfathered participants and 85% lump sum; 15% annuity for all other participants. Married participants are assumed to elect the 50% joint and survivor annuity and unmarried participants are assumed to elect the single life annuity. No other optional form of payment election is assumed.

For current deferred vested participants with a cash balance type benefit, 100% lump sum is assumed. For all other current deferred vested participants 100% annuity is assumed

Percent married

80% of male participants; 70% of female participants.

Spouse age

Wives are assumed to be three years younger than husbands.

Valuation pay	2020 base salary pay (Grandfathered) – not estimated due to freeze of final average pay accruals at December 31, 2010. 2020 expanded pay (Cash Balance) – sum of the following updated one year according to the salary increase assumption: (i) 2020 base salary (ii) a 15% increase for overtime eligible employees and a target bonus percent increase for incentive-eligible employees
At-risk assumptions	If at-risk calculations are required, all participants eligible to elect benefits during the current and subsequent ten plan years are assumed to commence benefits at the earliest possible date under the plan, but not before the end of the current plan year, except in accordance with the regular valuation assumptions. In addition, all participants (not just those eligible to begin benefits within the next 11 years) are assumed to elect the most valuable form of benefit under the plan, which is usually a joint and survivor form of payment.
Timing of benefit payments	Annuity payments are payable monthly at the beginning of the month and lump sum payments are payable on date of decrement.

Methods

Valuation date	First day of plan year.
Funding target	Present value of accrued benefits.
Target normal cost	Present value of benefits expected to accrue during plan year plus plan-related expenses expected to be paid from the trust (based on actual trust expenses paid in previous year, adjusted by the difference between the prior and expected current year PBGC premiums)
Actuarial value of assets	Average of the fair market value of assets on the valuation date and the six immediately preceding months, adjusted for contributions, benefit/expense payments and expected investment returns. The average asset value must be within 10% of fair value, including contributing receivable. The method of computing the actuarial value of assets complies with rules governing the calculation of such values under PPA. These rules produce smoothed values that reflect the underlying market value of plan assets but fluctuate less than the market value. As a result, the actuarial value of assets will be lower than the market value in some years and greater in other years. However, over the long term under PPA's smoothing rules, the method has a bias to produce an actuarial value of assets that is below the market value of assets.
Benefits Not Valued	All benefits were valued except – Any liabilities that may be reinstated in the event of reemployment – The alternate benefit formula for members who did not elect to withdraw their employee contributions – Any liabilities relating to members' unwithdrawn employee contributions – Liabilities related to special benefits as a result of termination due to downsizing and restructuring

Data Sources

Willis Towers Watson used participant and asset data as of January 1, 2020, supplied by Mercer, the third party administrator for AEP. Data for one group of participants was supplied directly by AEP Data were reviewed for reasonableness and consistency, but no audit was performed. Based on discussions with the plan sponsor, assumptions or estimates were made when data were not available, and the data was adjusted to reflect any significant events that occurred between the date the data was collected and the measurement date. To the extent that data were not provided, estimates were made based on prior year information.

2. Assumptions and methods for pension cost purposes

Actuarial Assumptions and Methods — Pension Cost

Demographic Assumptions

Discount rate		3.25%
Return on assets*		5 75%

Annual rates of increase

- Compensation:
  - Representative rates

Age	Rate
< 25	11.50%
25 – 29	8.50%
30 – 34	7.00%
35 – 39	6.00%
40 – 44	5 00%
45 – 49	4.50%
50 – 54	4.00%
55 – 59	3.75%
60 – 64	3.50%
65 – 69	3.25%
> 70	3.00%

  - Weighted average 5.00%

■ Cash balance crediting rate	4 00%
■ Lump sum/annuity conversion rate	3.00%
■ Future Social Security wage bases	3.50%
■ Statutory limits on compensation	2.50%

The return on assets shown above is net of investment expenses and administrative expenses assumed to be paid from the trust.

* Also used as discount rate for plan accounting (ASC 960) purposes.

Demographic Assumptions

Inclusion Date
The valuation date coincident with or next following the date on which the employee becomes a participant.

New or rehired employees
It was assumed there will be no new or rehired employees.

Mortality

- Healthy
The Pri-2012 Private Retirement Plans mortality tables with sex-distinct rates for employees, retirees, and contingent survivors, with no collar or amount adjustment, and a fully generational mortality improvement projection using a modified version of Scale MP-2019 projecting from the base year of 2012. The modified projection scale reflects long-term rates of mortality improvement equal to 75% of the corresponding rates of Scale MP-2019.

- Disabled
The Pri-2012 Private Retirement Plans disabled mortality tables with separate rates for males and females and a fully generational mortality improvement projection using a modified version of Scale MP-2019 projecting from the base year of 2012. The modified projection scale reflects long-term rates of mortality improvement equal to 75% of the corresponding rates of Scale MP-2019.

Lump sum/annuity conversion
PPA 2020 optional combined mortality with static projection to commencement using MP-2019.

Termination
Rates varying by service

Percentage leaving during the year	
Service	Rate
<3	7 00%
3 – 4	6 00%
5 – 9	5 00%
10 – 14	4.00%
15 – 19	2 50%
20 +	1.50%

Disability
Rates apply to employees not eligible to retire and vary by age and sex a indicated by the following sample values:

Percentage becoming disabled during the year		
Age	Male	Female
20	0 060%	0 090%
30	0 060%	0 090%
40	0 074%	0 110%
50	0 178%	0.267%
60	0.690%	1 035%

Retirement

Rates varying by age; average retirement age 63:

Percentage retiring during the year	
Age	Rate
55 – 58	4 00%
59	6 00%
60	7.50%
61	9 00%
62 – 64	16.00%
65 – 67	25 00%
68 – 69	20.00%
70 +	100 00%

Benefit commencement date:

- Preretirement death benefit — The later of the death of the active participant or the date the participant would have attained age 55.
- Deferred vested benefit (active participants) — The later of age 55 or termination of employment.
- Deferred vested benefit (current deferred vested) — The later of age 65 or current age
- Disability benefit — Upon disablement.
- Retirement benefit — Upon termination of employment.

Form of payment

50% lump sum; 50% annuity for retirement eligible East grandfathered participants and 85% lump sum, 15% annuity for all other participants Married participants are assumed to elect the 50% joint and survivor annuity and unmarried participants are assumed to elect the single life annuity. No other optional form of payment election is assumed.

For current deferred vested participants with a cash balance type benefit, 100% lump sum is assumed For all other current deferred vested participants 100% annuity is assumed.

Percent married

80% of male participants; 70% of female participants.

Spouse ages

Wives are assumed to be three years younger than husbands.

Valuation pay

2020 base salary pay (Grandfathered) – not estimated due to freeze of final average pay accruals at December 31, 2010.

2020 expanded pay (Cash Balance) – sum of the following updated one year according to the salary increase assumption

(i) 2020 base salary
(ii) a 15% increase for overtime eligible employees and a target bonus percent increase for incentive-eligible employees

Administrative expenses

Expected return of assets is net of expenses paid by the trust.

Timing of benefit payments

Annuity payments are payable monthly at the beginning of the month and lump sum payments are payable on date of decrement.

Methods

Service cost and projected benefit obligation

Projected unit credit

Market-related value of assets

The market value on the valuation date less the following percentages of prior years' investment gains and losses.

- 80% of the prior year
- 60% of the second prior year
- 40% of the third prior year
- 20% of the fourth prior year

The investment gain or loss is calculated each year by:

- Rolling forward the prior year's fair value of assets with actual contributions, benefit payments and expected return on investments using the long-term yield assumption
- Comparing the actual fair value of assets to the expected value calculated above.

Benefits not valued

All benefits were valued except:

- Any liabilities that may be reinstated in the event of reemployment
- The alternate benefit formula for members who did not elect to withdraw their employee contributions
- Any liabilities relating to members' unwithdrawn employee contributions
- Liabilities related to special benefits as a result of termination due to restructuring or downsizing

Data Sources

Willis Towers Watson used participant and asset data as of January 1, 2020, supplied by Mercer, the third party administrator for AEP. Data for one group of participants was supplied directly by AEP Data were reviewed for reasonableness and consistency, but no audit was performed. Based on discussions with the plan sponsor, assumptions or estimates were made when data were not available, and the data was adjusted to reflect any significant events that occurred between the date the data was collected and the measurement date To the extent that data were not provided, estimates were made based on prior year information.

The Company also provided the amounts recognized in accumulated other comprehensive income as of the end of the December 31, 2019 fiscal year and amounts recognized in other comprehensive income during the December 31, 2019 fiscal year.

Assumptions Rationale - Significant Economic Assumptions for Contributions

Discount rate	The basis chosen was selected by the plan sponsor from among choices prescribed by law, all of which are based on observed market data over certain periods of time.
Cash Balance Interest crediting rate	The plan credits interest to cash balance accounts using the 30-year Treasury rate for the September of the preceding year with a minimum rate of 4.00%. The assumption is based on the plan sponsor's long-term expectations of yields on U.S. Treasuries. We believe that the selected assumption does not significantly conflict with what would be reasonable based on market conditions at the measurement date.
Lump sum conversion rate	As required by IRC 430, lump sum benefits are valued using "annuity substitution", so that the interest rates assumed are effectively the same as described above for the discount rate.
Rates of increase in:	
▪ Compensation	Rates of increase in compensation were based on an experience study conducted in 2019, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.
▪ National average wages (NAW) (e.g., Social Security wage bases)	The assumed NAW is based on assumed CPI as shown below, plus assumed increases in real wages (the portion of GDP increases that becomes part of wages). Such assumed future increases in real wages are based on a combination of historical averages and an expectation that the future rates will be lower (higher) than historical averages.
▪ Increases in statutory limits (CPI)	The assumed CPI is based on a combination of historical average CPI, current conditions and an assumed progression from recently experienced CPI to the long-term expected level. The final assumption represents a composite of current rates and long term expected rates.

Assumptions Rationale - Significant Economic Assumptions for Accounting

Discount rate	As required by U.S GAAP, the discount rate was chosen by the plan sponsor based on market information on the measurement date.
Expected return on plan assets	We understand that the expected return on assets assumption reflects the plan sponsor's estimate of future experience for trust asset returns, reflecting the plan's current asset allocation and any expected changes during the current plan year, current market conditions and the plan sponsor's expectations for future market conditions.
Cash balance interest crediting rate	The plan credits interest to cash balance accounts using the 30-year Treasury rate for the September of the preceding year

with a minimum rate of 4.00%. The assumption is based on the plan sponsor's long-term expectations of yields on U.S. Treasuries. We believe that the selected assumption does not significantly conflict with what would be reasonable based on market conditions at the measurement date.

Conversion rate for lump sums and annuities

The plan uses IRC 417(e)(3) as its basis to convert between lump sums and annuities. Because the 417(e)(3) interest rates are based on corporate bond yields, the assumption is based on the plan sponsor's long-term expectations of yields on high-quality corporate bonds. We believe that the selected assumption does not significantly conflict with what would be reasonable based on market conditions at the measurement date.

Rate of increase in compensation

Rates of increase in compensation were based on an experience study conducted in 2019, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.

Assumptions Rationale - Significant Demographic Assumptions

Mortality

Assumptions used for accounting purposes were selected by the plan sponsor and, as required by U.S. GAAP, represent a best estimate of future experience. Assumptions used for contribution purposes are as prescribed by IRC §1.430(h)(3)-1.

Termination

Termination rates are based on an experience study conducted in 2019, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future

Assumed termination rates differ by service because of observed decreases in termination rates as employees attained additional years of service.

Retirement

Retirement rates were based on an experience study conducted in 2019, with consideration of whether any conditions have changed that would be expected to produce different results in the future.

Form of payment

Rates at which retirees elect lump sums versus annuities are based on an experience study conducted in 2019, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.

Source of Prescribed Methods

Funding methods	The methods used for funding purposes as described in Appendix A, including the method of determining plan assets, are "prescribed methods set by law", as defined in the actuarial standards of practice (ASOPs). These methods are required by IRC §430, or were selected by the plan sponsor from a range of methods permitted by IRC §430.
Accounting methods	The methods used for accounting purposes as described in Appendix A, including the method of determining the market-related value of plan assets, are "prescribed methods set by another party", as defined in the actuarial standards of practice (ASOPs). As required by U.S. GAAP, these methods were selected by the plan sponsor.

Changes in Assumptions and Methods

Change in assumptions since prior valuation

The segment interest rates used to calculate the funding target, target normal cost and to convert 417(e) based forms of payments were updated from the segment rates as of October 2018 to the segment rates as of October 2019

The mortality projection scale used to calculate the funding target and target normal cost was updated from Scale MP-2017 to Scale MP-2018, as required by IRC §430.

Assumed plan-related expenses of $8,117,720 were added to the target normal cost.

The discount rate decreased from 4.30%.to 3.25%.

The lump sum conversion rate decreased from 3.90% to 3.00% for accounting purposes.

The expected long-term rate of return on plan assets decreased from 6.25% to 5.75%

For accounting purposes, the healthy mortality assumption was changed to the Pri-2012 Private Retirement Plans mortality tables with sex-distinct rates for employees, retirees, and contingent survivors with no collar or amount adjustment, and a fully generational mortality improvement projection using a modified version of Scale MP-2019 projecting from the base year of 2012. The modified projection scale reflects long-term rates of mortality improvement equal to 75% of the corresponding rates of Scale MP-2019.

For accounting purposes, the disabled mortality assumption was changed to the Pri-2012 Private Retirement Plans disabled mortality tables with separate rates for males and females and a fully generational mortality improvement projection using a modified version of Scale MP-2019 projecting from the base year of 2012. The modified projection scale reflects long-term rates of mortality improvement equal to 75% of the corresponding rates of Scale MP-2019.

The mortality used to convert to 417(e) based forms of payment was updated to PPA 2020 optional combined mortality with static projection to commencement using MP-2019.

The following assumptions were updated based on the results of an experience study performed in 2019; rate of compensation increase, termination, retirement, and form of payment.

Change in methods since prior valuation	None.

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Appendix B1: Summary of principal plan provisions covered by the former East Retirement Plan

Plan Provisions

Effective Date	May 1, 1955. Restated effective January 1, 2017.
Recent Amendments	Plan was amended and restated effective December 31, 2019.
Covered Employees	Employees become Members of the Plan on the first day of the month following completion of one year of service.
Participation Date	Date of becoming a covered employee.

Definitions

Grandfathered employee	If, on December 31, 2000, either: – Participating in AEP System Retirement Plan, or – In one-year waiting period for AEP System Retirement Plan participation.
Vesting service	A period of time from employment date to termination date and, in general, includes periods of severance that are not in the excess of 12 months.
Accredited service	Elapsed time from date of hire (from benefit service start date).
Cash balance pay	Pay received during the year, including base pay, overtime, shift differential/Sunday premium pay and incentive pay, subject to IRS limits.
Covered compensation amount	The average of the Social Security taxable wage based during the 35-year period including the year in which the participant retires, dies, becomes disabled or otherwise terminates employment. This monthly average is calculated to the next lower or equal whole dollar amount and is then rounded to nearest $50.
Final average pay	Average of the highest 36-consecutive months of base pay out of the last 120 months of employment, subject to IRS limits.
Normal retirement date (NRD)	The first day of the calendar month whose first day is nearest the later of the member's 65th birthday or the completion of five years of Vesting Service.

Cash balance account

Recordkeeping account to which annual Interest Credits and annual Company Credits are credited. The cash balance account is updated at the end of each plan year and is equal to:

Cash Balance Account as of the end of the prior plan year
+
Interest Credits
+
Company Credits

Cash balance benefit

Cash Balance Account converted to a monthly annuity

Opening balance

For those participating in or eligible for the AEP System Retirement Plan on December 31, 2000, opening balance is calculated as follows:

- Present value of monthly normal retirement benefit determined as of December 31, 2000, and payable at age 65 (or current age if older)
  - Present value determined based on 5 78% interest and IRS regulated mortality (GAM83 Unisex) data for lump sums (postretirement only)

Plus

- Credit for early retirement subsidy for monthly payments beginning at age 62 (or current age if older)

Plus

- Transition credit based on age, service and pay received in 2000 (see "Company Credits" for credit percentages)
  - Age and service based on completed whole years as of December 31, 2000.

For employees hired on or after January 1, 2001, opening balance is $0.

Interest credits

Interest credits are applied to beginning of year account balance on December 31 each year.

Based on the average 30-year Treasury Bond rate for November of the previous year.

Minimum of 4%.

Company credits

Applied to account balance on December 31 or termination date if earlier.

Amount is a percentage of eligible pay received during the year, based on age plus years of Vesting Service (age and service in completed whole years as of December 31).

Age Plus Years of Service	*Annual Company Credit*
Less than 30	3.0%
30 – 39	3.5%
40 – 49	4.5%
50 – 59	5 5%
60 – 69	7.0%
70+	8.5%

Monthly Grandfathered Benefit Sum of (1), (2) and (3):

(1) 1 10% of Final Average Pay x Accredited Service up to 35 years

(2) 0.50% of Final Average Pay Less Covered Compensation x Accredited Service up to 35 years

(3) 1.33% of Final Average Pay x Accredited Service between 35 and 45 years

Accruals for the grandfathered benefit ceased on December 31, 2010.

Long-term disability and paid leaves Participants do not receive company credits while on long-term disability. Vesting service continues.

Unpaid leave No compensation for annual Company Credit. Vesting service continues.

Eligibility for Benefits

Normal retirement All members at or after their Normal Retirement Date.

Early retirement Any time after attainment of age 55 and completion of five years of vesting. Applicable only to grandfathered benefits.

Postponed retirement Retirement after Normal Retirement Date.

Vested termination All members who terminate employment after completion of three years of Vesting Service, or upon death.

Disability All members who are unable to work at own occupation solely because of sickness or injury for the first 24 months of disability. After 24 months of disability, the participant is eligible if unable to work at any gainful occupation for which the participant may be able, or may reasonably become qualified by education, training or experience, to perform.

Surviving spouse The surviving spouse of a Grandfathered Member who retired or is eligible to retire on Normal or Early Retirement and who was married to that spouse for the year preceding commencement and whose grandfathered benefit exceeds his or her Cash Balance Benefit.

Preretirement death Beneficiary of deceased member.

Benefits Paid Upon the Following Events

Normal retirement

For Grandfathered Employees, the better of the monthly grandfathered benefit or the Cash Balance Benefit determined as of Normal Retirement Date For all other employees, the Cash Balance Benefit determined as of Normal Retirement Date.

Early retirement

For Grandfathered Employees, the better of

(1) The monthly grandfathered retirement benefit reduced by 3% per year for each year commencement precedes age 62, and

(2) The Cash Balance Benefit determined as of the Early Retirement Date.

For all other employees, the Cash Balance Benefit determined as of the Early Retirement Date.

Deferred vested retirement

The accrued Normal Retirement Benefit (better of Cash Balance and Grandfathered Benefits, if eligible), payable at Normal Retirement Date or actuarially reduced and payable at any age.

Disability

The greater of (1) or (2):

(1) Accrued Grandfathered Retirement Benefit reduced as in the Early Retirement Benefit If retirement occurs prior to age 55, the benefit is further reduced actuarially from age 55 The Disability Retirement Benefit will reflect Accredited Service that accrued (at most recent rate of base earnings) to a member while receiving benefits under the Company's LTD plan.

(2) The Cash Balance Benefit with continued Company Credits while disabled.

Benefit (1) applies for Grandfathered Employees only.

Preretirement death

Better of (1) or (2):

(1) The grandfathered monthly benefit as if the employee commenced a 60% qualified joint and survivor benefit at his earliest retirement date

(2) Annuity equivalent of Cash Balance account or the cash balance account.

Benefit (1) applies for a Grandfathered Employee whose beneficiary is his or her spouse.

Surviving spouse benefits

A benefit payable for life equal to 30% of the single life annuity payable to the grandfathered member. The spouse's benefit is actuarially reduced for each year by which the spouse is more than ten years younger than the member. Payable to Grandfathered Employees only.

Other Plan Provisions

Forms of payment

- Grandfathered employees

The following are available for Grandfathered Employees for both the Grandfathered Benefit and the Cash Balance Benefit:

- Full lump sum payment.
- Combination of partial lump sum (25%, 50% or 75% of full lump sum) with remainder paid as a monthly benefit (see below).
- Monthly payment:
  - Single life annuity.
  - Optional joint annuities (spouse or other beneficiary).
    - Available in 40%, 50%, 60%, 75%, 100%.
    - Can elect pop-up and/or level income options.
  - Automatic company-paid 30% surviving spouse annuity included in Grandfathered Benefit annuity if terminate on or after age 55 and married at least one year Cash Balance Benefit is actuarially reduced for this feature.

A one-time option to elect a lump sum of the accrued benefit for terminated vested participants whose benefit was determined in no way by reference to either the AEP or CSW cash balance formulas was offered during the period from May 1, 2012 through June 30, 2012. Participants eligible for the window were also permitted to elect any of the other optional forms of payment generally applicable to such a participant under the normal terms of the plan document Any participant who elected to commence benefits under this window, regardless of lump sum or annuity election, had a benefit commencement date of August 1, 2012.

- Employees hired on or after January 1, 2001

The following are available for those hired on or after January 1, 2001:

- Full lump sum payment.
- Combination of partial lump sum (25%, 50% or 75% of full lump sum) with remainder paid as a monthly benefit (see below).
- Monthly payment:
  - Single life annuity.
  - Joint annuities (spouse or other beneficiary).
    - Available in 50%, 75%, 100%.

Form of payment conversion for non-417(e) covered conversions

▪ Cash balance	7.50% interest and the applicable 417(e) Mortality Table.
▪ Grandfathered benefit	7.50% interest and the 1974 George B Buck Mortality Table.
Pension Increases	None.
Plan Participants' Contributions	Prior to January 1, 1978, employee contributions were required as a condition of Membership. In May and June of 1981, Members were permitted an election to withdraw those contributions. Those who did not elect to withdraw have retirement benefits based on a formula that differs from the formulas previously described in this section However, the number of nonelecting Members is so small that special plan provisions for that group have not been included in this summary.
Maximum on benefits and pay	All benefits and pay for any calendar year may not exceed the maximum limitations for that year as defined in the Internal Revenue Code. The plan provides for increasing the dollar limits automatically as such changes become effective. Increases in the dollar limits are assumed for determining pension cost but not for determining contributions.
Benefits not valued	A small portion of the population made employee contributions to the plan. Because the amount of these contributions is not material to the plan, they are not part of the valuation Participants who were employees of Columbus Southern Power (CSP) at the time AEP acquired that company have a frozen benefit under the CSP benefit formula at December 31, 1986. Benefits for these participants are the greater of an all-service AEP benefit and a two-part benefit consisting of the frozen CSP benefit plus an AEP benefit accrued from January 1, 1987. Because this applies to a small portion of the population and the CSP frozen benefit is not often the greater benefit for these participants, this benefit is not valued.
Plan status	Ongoing.

Future Plan Changes

Willis Towers Watson is not aware of any future plan changes that are required to be reflected

Changes in Benefits Valued Since Prior Year

We understand that the Plan was amended on December 31, 2019 to allow Employees of AEP Energy, Inc. to begin accruing benefits under the cash balance formula effective January 1, 2020.

Appendix B2: Summary of plan provisions covered by the former West Retirement Plan

Plan Provisions

Effective Date	January 1940. Restated effective January 1, 1997.
Recent Amendments	Plan was merged with and into the American Electric Power System Retirement Plan, which was most recently amended and restated effective January 1, 2017.
Covered Employees	All full-time employees of a Participating Company employed by CSW before January 1, 2001, and not covered by a union (that has not bargained for coverage) or another pension plan provided by AEP. Part-time employees of the Company had to work more than 1,000 hours in the first anniversary year or subsequent calendar years.
Participation Date	Date of becoming a covered employee

Definitions

Grandfathered employee	Employees who were at least age 50 with ten years of vesting service of July 1, 1997.
Vesting service	All service from date of hire in completed years.
Credited service	The aggregate of: For the period prior to January 1, 1976: (1) The number of full years in the last continuous period that employee was a participant after June 30, 1970, plus (2) Credited service under any prior plan if service extended to July 1, 1970. For the period beginning on or after January 1, 1976, the number of full years of service.
Cash balance pay	Pay received during the year, including base pay, overtime, shift differential/Sunday premium pay and incentive pay, subject to IRS limits
Final average pay	Highest average annual earnings (base pay only) during any 36 consecutive months in the 120 months before retirement. Any changes in earnings within the last three months before retirement will not be taken into account.
Normal retirement date (NRD)	The first day of the calendar month on or following the member's 65^{th} birthday.

Cash balance account	Recordkeeping account to which annual interest credits and annual company credits are credited. The cash balance account is updated at the end of each plan year and is equal to. Cash Balance Account as of the end of the prior plan year + Interest Credits + Company Credits
Cash balance benefit	Cash Balance Account converted to a monthly annuity
Interest credits	Interest credits are applied to beginning of year account balance on December 31 each year. Based on the average 30-year Treasury Bond rate for November of the previous year. Minimum of 4%
Company credits	Applied to account balance on December 31 or termination date if earlier. Amount is a percentage of eligible pay received during the year, based on age plus years of Vesting Service (age and service in completed whole years as of December 31).

Age Plus Years of Service	*Annual Company Credit*
Less than 30	3.0%
30 – 39	3.5%
40 – 49	4.5%
50 – 59	5.5%
60 – 69	7.0%
70+	8.5%

Monthly Grandfathered Benefit

Greater of (1) or (2) below with automatic cost of living adjustments upon retirement:

(1) Basic benefit — An annual amount equal to:

The aggregate of a participant's (a) earned benefit (if any) under any prior plan or acquired Company pension plan under which no election was made to receive a paid-up annuity; and (b) participant contributions without interest for the period commencing on or after July 1, 1970. For the period after September 1, 1980, participants will be deemed to have made contributions at the rate of 2% annually of the participant's annual rate of earnings as of January 1.

(2) Minimum benefit:

1-2/3% of final average annual earnings less 50% of participant's annual primary Social Security benefit times years of credited service up to 30 years.